

MANUFACTURERS' RECORD

A WEEKLY SOUTHERN INDUSTRIAL, RAILROAD AND FINANCIAL NEWSPAPER

VOL. XLV. No. 13 }
WEEKLY.

BALTIMORE, APRIL 14, 1904.

\$4.00 A YEAR.
SINGLE COPIES, 10 CENTS.

Manufacturers' Record.

PUBLISHED EVERY THURSDAY BY THE
MANUFACTURERS' RECORD PUBLISHING CO.

RICHARD H. EDMONDS, President.
THOMAS P. GRASTY, Vice-President.
FRANK GOULD, Secretary-Treasurer.

OFFICE: MANUFACTURERS' RECORD BUILDING,
BALTIMORE.

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Editor and General Manager.

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General Staff Correspondent.

SUBSCRIPTION, - - - - \$4 a Year.
TO FOREIGN COUNTRIES, - 26s. 6d. a Year.

BALTIMORE, APRIL 14, 1904.

In a letter to the Manufacturers' Record Mr. George B. Edwards, president of the Metropolitan Investment Co. of Charleston, S. C., writes:

Permit me to express to you my high appreciation of your article "Baltimore for Baltimoreans" in the Manufacturers' Record for March 31. I never read anything more to the point. It is surprising how any sensible person can expect any progress to be made anywhere except by the influx of new people and new money.

LARGE GAINS ON SOUTHERN ROADS.

A number of the Southern and Southwestern railroad companies have issued their statements for February, and in nearly every instance substantial gains are shown in comparison with the corresponding month of last year. In addition to this, a further review of operations covering the eight months from the first of July last to the end of February also displays a continuous record of progress and improvement, some of the gains being remarkably large.

For February, 1904, the following increases are reported: Southern Railway, gross earnings over 11 per cent., net earnings 28.9 per cent.; Atlantic Coast Line, gross earnings 10.7 per cent., net earnings 26.3 per cent.; Louisville & Nashville Railroad, gross 12.1 per cent., net 20 per cent.; St. Louis & San Francisco Railroad, gross 16.3 per cent., net 10.1 per cent.; St. Louis Southwestern Railway, gross 16.8 per cent., net 57.2 per cent.; Kansas City Southern Railroad, gross 9.5 per cent., net 38.6 per cent.; Central of Georgia Railway, gross a decrease of a trifle over 1 per cent., net an increase of very nearly 32.8 per cent.; Chesapeake & Ohio Railway, gross 6.4 per cent. and net 1.2 per cent., both being increases; Norfolk & Western Railway, gross an increase of 5.3 per cent. and net a decrease of less than 1 per cent. Thus for the midwinter month these nine roads show an average gain in gross earnings of 9.8 per cent., and in net earnings of very nearly 24 per cent. The large gain in net as compared with the increase in gross earnings is due generally to growth of busi-

ness without a proportionate increase in the cost of conducting it.

For the period of eight months, July to February, inclusive, the following increases are reported: Southern Railway, gross earnings 8.1 per cent., net earnings 10.3 per cent.; Atlantic Coast Line, gross 5.6 per cent., net 17 per cent.; Louisville & Nashville Railroad, gross 7.3 per cent., net 3.6 per cent.; St. Louis & San Francisco Railroad, gross 14.9 per cent., net 5.7 per cent.; St. Louis Southwestern Railway, gross 7.7 per cent., net 27 per cent.; Kansas City Southern Railroad, gross 7 per cent., net 9.8 per cent.; Chesapeake & Ohio Railway, gross 20.6 per cent., net 20.8 per cent.; Norfolk & Western Railway, gross 10.7 per cent., net 4.8 per cent.; Central of Georgia Railway, gross 3.2 per cent., but in the net earnings there was a decrease of nearly 5.2 per cent. This shows for the period an average gain in gross earnings of 9.5 per cent., and in net earnings of 10.4 per cent.

Considered as a whole, this display of the results of operation by Southern railroads is exceedingly gratifying, and it is, moreover, in thorough harmony with the reports of success and progress that are coming from other lines of business in the South and Southwest.

CHARLESTONIANS AND NEGROES

A correspondent of the Boston Evening Transcript traveling through the South, toward which he displays a friendly mind, because, perhaps, he is a transplanted Southerner of the new and novel regime, made an awkward slip in his letter published a few days ago. In a reference to the cotton-mill industry, which showed that he is ignorant of the history of that industry in the South before the war, he wrote:

It was interesting at Charleston to hear men of the most conservative class of that most conservative of American cities discuss the business with an intimate knowledge of men and methods not merely at Lowell and Fall River, but at Manchester and other English and European centers. Surely if a Charlestonian of the Battery can find a place in the new commercial regime, the negro ought to find one also.

It is difficult to imagine why any well-informed person should regard as notable the rather normal fact that "Charlestonians of the Battery can find a place in the new commercial regime." But the correspondent shows, in spite of his friendly attitude, that he is not any better informed on that particular point than he is about the negro and his place in the new commercial regime, which, indeed, he is on the point of discovering in other parts of his correspondence. As a matter of fact, the negro is finding his place in spite of the tremendous odds against him, not the least of which are the persistent efforts, modified to disarm suspicion according to circumstances, but in unbroken continuity from the days of the Union Leagues to the days of the Southern Education Scheme, to handle the negro as a fictitious being, thus unfitting him for his proper place anywhere.

AN EXTRAORDINARY COLLECTION OF CARS.

The following appeal in behalf of the forthcoming Conference for Education in the South at Birmingham, made to what Mr. Robert C. Ogden, president of the conference, evidently regards as "the best South" and Mr. Carnegie as "the best-educated white element in the South"—an appeal enough to make an intelligent and refined horse laugh—was given appropriate publicity on April 4 in the columns of the Atlanta Journal:

WILL TRAVEL IN SPLENDID TRAIN.

IN SUMPTUOUS SPLENDOR THE MEMBERS OF EDUCATIONAL FUND WILL COME SOUTH TO DIVIDE GIFT TO SCHOOLS.

(Special Dispatch to the Journal.)

Washington, April 4.—Sixty members of the southern Educational fund committee are to arrive in Washington next week on their way south to inspect a number of small schools and school sites in several of the southern states. They are to make the inspection so they may intelligently disburse the million dollars recently contributed to the fund by John D. Rockefeller.

The most notable feature of the trip is the magnificence of the train on which the party is to make the trip. This train is to exceed in equipment the one on which the late President McKinley made his historic transcontinental journey.

The train is to consist of a Pullman composite car, containing besides state rooms, a Turkish bath room, barber shop and several other comforts; two of the finest Pullman dining cars; three cars containing nine state-rooms, two Pullmans with seven state-rooms; two drawing room cars and an eight-section observation car.

The cost of this extraordinary collection of cars daily is to be fifty dollars for each car, the money going to the Pullmans, and \$1.50 for every mile the train travels, this going to the railroad companies for hauling the cars. Meals are to cost one dollar each without extras, and sixty-eight persons eating three meals a day means a cost of \$204 a day. There are a number of incidental expenses which railroad men say are to amount to about thirty dollars a day.

The party is to leave New York for Washington April 13. The train reaches here the same evening. The morning following the party is to go to Old Point Comfort, where rooms have been engaged at one of the finest hotels there at the rate of five dollars a day for each of the party. From Old Point Comfort the educators are to visit Danville, Petersburg, Richmond, Charlottesville, Charlotte, Wilmington, N. C., Atlanta, Birmingham, Mobile, Nashville and Louisville and a number of intermediate towns and cities.

The party expects to be traveling on the railroad eighteen days. They are to look thoroughly into the educational requirements of the south and when they return to New York they are to announce how the million dollars is to be spent.

The combination of inexcusable ignorance in the headlines and verdant Jenkinsism in the body of this wonderful piece of news bears all the earmarks of composition by the office cat of the Atlanta Journal under the inspiration of some "official" of the Southern Education Scheme—possibly, one who is latest described as in fact "the Southern representative of Robert C. Ogden of New York, president of the conference," and as must always be written in such connection, the partner of John Wana-

maker of Philadelphia, expert in keeping Wanamaker to the front in other places than in paid advertisement at the top of the column next to pure reading matter in the newspapers.

The foreword is so bizarre, not to say vulgar, that it is worthy of a few words of comment. Of the same strain as the announcement sent from Atlanta two years ago in advance of the trip through Georgia of the same party of "educators"—an announcement which inclined not a few of the gullible to stand at cross-roads stations with buckets, bags and tin cups to catch some of the golden stream which they naturally believed the train was to vent, though there was nary a red for them—it is even more ill-informed and obsequious. What an effect the mere mention of a million dollars has upon some folks!

But unless there has been a revolution in the plans and an explosive swelling of the exchequer, there is no fund of a million dollars to be divided by the "educators" of this extraordinary collection of cars. They were given a spurt three or four years ago by Mr. John D. Rockefeller's placing at their disposal \$100,000 a year for ten years. The flight of time and other things have disposed of \$300,000, leaving seven years for the South to be regaled by similar incursions into its midst, as it were.

Seriously, it must not be imagined that one cent of this fund is spent for the splendid train. The money for that, it is understood, comes from Mr. Ogden, who, several years ago, finding that with a passing away of the old abolitionists, interest in the "education" of Southern negroes was waning, began to take parties of friends having the public ear on little trips to Hampton and Tuskegee. But the philanthropy manifested in the train must in itself, solitary and alone, be an education for Mr. Ogden's "best South."

Think of it!

Imagine this "extraordinary collection of cars," costing fifty dollars for each car daily, and consisting of a composite car, with a Turkish bathroom, a barber shop and "several other comforts," two of the finest dining cars, five stateroom cars, two drawing-room cars and an eight-section observation car, visiting Danville, Petersburg, Richmond, Charlottesville, Charlotte, Wilmington, N. C., Atlanta, Birmingham, Mobile, Nashville and Louisville and a number of intermediate towns and cities, to say nothing of Columbia, S. C., which is already panting, as the hart panteth for the water brooks, for a visit from the Conference for Education in the South in 1905!!

What an education for the South this "extraordinary collection of cars" will be in itself!!!

It alone is worth more than the price of admission!!!!

It must be "the most notable feature of the trip."

Whoever in that section among the "best-educated white element" ever saw before a whole train of nine cars?

How the Southern vocabulary will be enriched by such phrases as "composite car," "Turkish bathroom," "barber shop," "dining car," "observation car"—and costing \$50 per day for each car! Stupendous! Sumptuous!! The mind staggers at its conception!!!

What an extraordinary collection of "educators," to have the temerity to bring with them their innocent wives and orphan children and to travel for eighteen whole and consecutive days of twenty-four hours each on this extraordinary collection of nine cars, not including the locomotive and tender!!!

They, too, will certainly be an "education" for "the best South." In vasty splendor, gilt-edged and a yard wide—the wool being kept in the background for this occasion—a new genus is to be revealed. Picture the situation! Here are sixty-eight persons who think nothing of rashly stopping at one of the finest hotels at Old Point Comfort at the rate of five dollars a day for each and every one of the party, who, with the most distingue aplomb (for diagram please consult the Atlanta Journal's office cat, or "the southern representative of Robert C. Ogden of New York," in fact), or, going about as ravening wolves, will incontinently devour three meals a day at a cost of one dollar per meal per head, or \$204 per day for the sixty-eight individuals, and who, in addition, will spend thirty dollars per day for "incidentals." There is an air of becoming mystery about that word "incidentals." The advance notice would be incomplete without it. But it may lead some statistical wag to divide thirty dollars by sixty-odd persons and to calculate that the quotient would average probably the price of three "extras" or of three of the "several other comforts" in that composite car at fifteen cents per, the conventional price in all first-class American establishments. Avaunt! Perish the thought! This extraordinary collection of cars takes itself too soberly and too seriously to be the subject of jest.

Extraordinary! Extraordinary!! Extraordinary!!! Hurrah for—us!!!!

Turn out, Southern folks, and accept in full the 5200 invitations to the "best South" to attend the Conference at Birmingham, and accept incidentally anything else that may be floating around free! Perhaps your turn to be one of the extraordinary collection of "educators" on "this extraordinary collection of cars" will come next year. Selah!

But how keenly P. T. Barnum must regret that he is dead.

Advertisements of Southern localities offering special advantages for the location of manufacturing enterprises will be found on pages 62 and 63.

AN EXAMPLE FOR SOUTHERN CITIES.

In publishing his History of Mecklenburg County and the City of Charlotte, Mr. D. A. Tompkins has conferred a distinct benefit upon the city, toward the progress of which he has wrought so mightily in other ways, and has given a hint that other Southern cities might consider to their profit.* His history is to be published in two volumes. The first, which has appeared, is a narrative tracing the history of the community from the time of the early settlements in Carolina unto the present. In language that can be understood by the

*History of Mecklenburg County and the City of Charlotte From 1740 to 1903. By D. A. Tompkins. Vol. I—Narrative. Printed at the Observer Printing House, Charlotte, N. C.

people are described the traits and habits of the settlers and their descendants, and the part played by them in the making of North Carolina. Such questions as education, religion, the professions, slavery and industries are discussed by periods, and of especial interest are the sidelights thrown upon the general history of the State as affected by the institution of slavery and by its passing. The writing of the history is in the unconventional style which characterizes Cotton and Cotton Oil and other works of the author, and for that reason will be the more widely read. For its material he has drawn upon from all available sources, including unpublished State and county records, private correspondence, diaries and business records, the files of the newspapers and the testimony of aged and reliable citizens, and has grouped the facts thus derived with pleasing effect. Strikingly illustrating the wonderful progress made by Charlotte during the past quarter of a century is a chapter embodying half-tone, full-page engravings of views enabling one to compare for 1888 and 1898 the city hall, the county courthouse, the railroad station and the roads. The improvement thus shown is typical of the advance which has made Charlotte the center of an area with a radius of 100 miles, in which are nearly 300 cotton mills, with a capital of \$100,000,000 and operating more than 3,000,000 spindles and 85,000 looms, Mecklenburg county alone having 181 industries, including machine shops and foundries, cotton-oil mills, fertilizer plants, etc. Other chapters tell of the rapid increase of population of the city, its attractions for the homeseeker and investor, while an incentive to greater progress is given in the following statement:

It is found that the gross profit to the county (not to the manufacturer) from manufacturing raw material at home is 30 per cent., and the annual profit on the capital invested is 26 per cent. Mecklenburg in 1902 produced 28,407 bales of cotton, for which the farmers received about \$1,000,000. Manufactured into various products it would be worth from 15 to 45 cents a pound, or a total of from \$2,000,000 to \$6,000,000. Mecklenburg's cotton factories increase the value of the annual cotton product of the county from \$1,000,000 to \$2,500,000.

That paragraph is a specimen of the inspiring tone pervading Mr. Tompkins' book, so full of convincing facts that it would pay everybody interested in the future of Charlotte to see that it has the widest possible circulation, and so well conceived that it is a model publication for every Southern city seeking to have its advantages known to the world.

MANY NEW RAILROADS PROJECTED.

March more than broke the record for new railroad projects in the South and Southwest, the number of companies incorporated being 27, as against 10 in February and 12 in January. The total mileage of these 27 projected lines is 2490, as compared with 850 miles in February and 846 for January. This makes a total of 49 new companies with 4186 miles of projected lines reported since the first of the year, and, in addition to these, 12 companies have applied to the Maryland legislature for charters for various lines in that State, ranging in length from 15 to 100 miles, and making a total of about 500 miles of proposed railroad.

West Virginia heads the list of March incorporations, with five companies; Georgia is next, with four; then come Alabama and Mississippi, with three each; they are followed by Virginia, Arkansas and Oklahoma Territory,

with two each, while North Carolina, South Carolina, Kentucky, Tennessee, Florida and Missouri are represented by one each. All of these companies are separate incorporations, not being connected with any of the large systems. Probably the most important is the Tidewater Railway, incorporated in Virginia to build the new coal road from the West Virginia bituminous fields to tidewater, as described in the Manufacturers' Record, but there are also several other projects of magnitude, one of them being the St. Louis, Little Rock & Gulf Railroad, which proposes to build about 700 miles of line from St. Louis to the Gulf coast of Louisiana, with a branch to Beaumont, Texas. Another is the Oklahoma, Roswell & White Mountain Railway, projected from Mangum, O. T., to White Mountain, N. M., about 400 miles. The Seaboard Traction Co. of Norfolk, Va., is another, with a plan to build about 300 miles of electric railway through the trucking district in that State, including a main line from Norfolk to Petersburg and Richmond. The Atlantic & Western Railroad is a fourth enterprise that is projected from Cumberland, Md., to Huntington, W. Va., about 225 miles.

Without taking note of the Maryland incorporations, which are surrounded by more or less uncertainty, as is frequently the case with legislative charters, it may be said that the present rate of development indicates that the Southern and Southwestern country will have a total of about 200 new railroad companies incorporated during this calendar year. The new lines reported from West Virginia, Kentucky and Tennessee are principally for the purpose of developing coal and timber land, although they will also act as common carriers. Active work has already begun upon a number of the roads in the way of surveying, and several are preparing to start construction. It is furthermore probable that the number of railroad incorporations each month will be inclined to increase, particularly in fuel and timber regions, on account of the growing demand for both coal and lumber.

THE STEAM TURBINE.

A great deal of interest attaches to the development of the steam turbine, which is progressing so rapidly, for the results are of importance to every user of power. Several well-developed types of turbine are already on the market and in general use under a variety of conditions, and the experimental stage of this power has given way quickly to practical use.

Out of all the thought and experimentation of more than a century of development of the use of steam as a primary power the turbine is really the only entirely new principle that has been brought forth. There have been innumerable improvements in the details of the reciprocating engine, and its efficiency has been greatly increased by the perfecting of valves, the better expansive use of steam, the compounding of cylinders, the use of condensers, etc., but all of these have been but successive steps in the improvement of the one generic type of motor—the reciprocating engine, the fundamental principle of which has not changed in a hundred years.

The advent of the steam turbine, however, is the coming of a radically new type of motor, in which rotary motion supersedes reciprocal movement, with the elimination of several important inherent evils in the old engine. The success that has come so quickly to the steam turbine promises to make

this the prevailing type of motor, particularly for those uses in which its advantages are most conspicuous.

The relative economy of the steam turbine has hardly been established with exactness at this early stage in its history, but its performance is sufficiently well known to define its efficiency as fully equal to the best performance of the most economical reciprocating engines. To this may be added the expectations of further advantage in more perfect compounding and condensing.

Apart from economy in the use of steam, the turbine has great advantages in economy of space and the smaller wear resulting from the substitution of rotary for reciprocating motion, and the reduction in the number of moving parts. There is such compactness of parts that it is possible to make even the largest turbines self-contained, while the rotary motion makes it entirely safe to set a large unit with little or no foundation as compared with the firm setting that must be provided for a reciprocating engine. When a turbine, of 1000 horse-power can be fully tested on the shop floor without any special foundations it is good evidence of absence of thrust or vibration.

Limitations of the practicable uses of the steam turbine have been foreseen from the beginning, but its field of usefulness is rapidly widening, and there seems to be no reason why it should not gradually attain most of the applications of the reciprocating engine. The first use of the turbine was in marine propulsion, but its ready adaptability for the driving of electrical generators quickly manifested itself, and thus far its largest use has been in this service. This form of motor has been recognized as having its largest field of usefulness in work requiring continuous operation at high speeds, but already it has passed beyond the electrical field, and turbines are now finding favor as mill engines.

With the advent of the steam turbine and the development of the gas engine into large units, and the use of electricity as a means of transmission, there has been more progress in the generation of power in the past decade than during all the years that have elapsed since the days of Watt.

In a letter to the Manufacturers' Record Mr. John L. Livers, electrical contractor, of Woodstock, Va., renewing his subscription, writes:

I find that it would be impossible for me to do business without it.

To Advertise Chattanooga.

The Chattanooga Manufacturers' Association, composed of the leading manufacturers of Chattanooga, Tenn., and representing an investment of over \$16,000,000, has added to its regular work an advertising bureau, through which it intends to systematically advertise the products of Chattanooga factories. It has recently issued a folder entitled "Why Buy in Chattanooga?" It gives a number of items of valuable information to the buyer, including information regarding freight rates out of Chattanooga and a classified list of articles made in Chattanooga. This list includes more than 450 articles, which are classified under the heads of agricultural and farm supplies, builders' supplies, clothing and textiles, furniture, grocers' and druggists' specialties, heavy iron work, household sundries, iron specialties, leather goods machinery and mill supplies, mining equipment, plumbers' supplies, vehicles, wood novelties and miscellaneous.

NEW RIVER AND POCAHONTAS.

The Relation of the Chesapeake & Ohio and the Norfolk & Western to These Great Coal Fields.

By CHARLES CATLETT.

[Written for the Manufacturers' Record.]

Since the Northern Securities decision there have been several rumors that the attorney-general of Virginia would bring suit to test the validity of the interest of the Pennsylvania Railroad in the Norfolk & Western and Chesapeake & Ohio roads. The conditions seem quite different to those involved in the above decision, but a discussion of some of the aspects of these relations may not lack interest.

The Pennsylvania Railroad either owns or controls the Norfolk & Western, the Chesapeake & Ohio and the Baltimore & Ohio roads. Its direct interest is smallest in the Chesapeake & Ohio, but it is equally definite in controlling its policy. As a simple sum in arithmetic it would look as if the question with the purchaser is what policy will produce the largest aggregate return, and the careless will immediately jump at the conclusion that such a plan must be followed regardless of whether in doing so the resources and the shippers on one or the other of these roads are sacrificed. But a more careful consideration will show the falsity of such a supposition, and that the largest aggregate return can best be secured by insuring the health and vitality of each member. The decay or destruction of any interest is far-reaching and cumulative, and the result is uncertain. The result of an effort to produce a strong and healthy living organization is also cumulative, and the result is certain. There can be no question which is best, and that the policy of the Pennsylvania road will be in the direction of upbuilding and development. While this is true, any assumption that such development and upbuilding will be of equal energy in all directions and will be entirely independent of the action of those who manage these roads, or of those who are served by each particular road, is doomed to disappointment. It is absolutely contrary to human nature.

The first effort of such control was to regulate rates on the great staple products. In many cases the returns were too low, and in all of them there were ruinous rate-cutting and secret rebates, which are foreign to good public policy and contrary to endless rulings of the interstate commerce commission. Other things equal, a permanent increase of 15 cents per ton on the coal and coke traffic of either the Chesapeake & Ohio or Norfolk & Western roads would alone equal a large per cent. of their entire net profits, would justify a large increase in their dividends, and would probably add \$30,000,000 to the market value of their stocks. The effect of secret rate-cutting and rebates is most injurious, and is indefensible either on legal or moral grounds, and if the Pennsylvania Railroad has prevented this it has laid the broadest possible foundation for successful development, and has greatly benefited every section reached by these roads.

The next effort of such interest would naturally be to investigate the organization and local conditions in the light of their own operations, and see where the same work could be done with greater efficiency. Finally, they will see that facilities are provided for doing everything that is being done on the best and most economical basis, and for taking care on the best terms of future extensions.

These first efforts are only along lines where there would seem to be no possibility of conflict between the interest of the several roads, because all would ap-

parently benefit alike, but this is not quite the case.

It makes no difference who controls the policy of these roads as a whole, the president, general manager and other local officers of each road control that road, and their fortunes are wrapped up in its success or failure. It would be no defense of their reputation to point out that the general policy of the group of roads required a sacrifice, nor would it satisfy their shippers. Neither is it a valid defense of bad results to say to the Pennsylvania Railroad "it was your fault."

A universal advance in freight may or may not bear equally on the several roads, depending on whether the previous rate was fair or the reverse. It might already be so high that any increase would curtail the market of one road without affecting that of another. In one case a shipper might easily meet the increase, in another case he could not. The question of what territory should naturally be served by one road, what should be considered individual, what neutral and what competing ground are all functions of past activity and skill and assurance as to future developments. So that at the very inception the ability of the management speaking for the shippers to set forth the claims of their particular road has measured the burdens of good or ill with which they have been endowed by this ownership of so large an interest by the Pennsylvania.

If this is so at its inception, where there is no appearance of conflict, how much more so must it be in questions of future expansion, where, apparently, at least there must be more or less conflict.

Probably the point would be plainer if we would confine the discussion to the New River coal district of the Chesapeake & Ohio, and incidentally compare it with the Pocahontas coal district of the Norfolk & Western. This is the more proper because the C. & O. and N. & W. are essentially coal roads, and because, in spite of all other resources, the coal and coke from these districts, with the mineral development and the merchandise, express and passenger traffic resulting from and dependent upon coal and coke, are the mainstay of these roads. It was the ability of these roads to put this particular coal into the markets which induced the purchase by the Pennsylvania of such large blocks of this stock.

It is not necessary to point out the need of a large amount of low-grade tonnage for such roads, but these particular coals are essential to these roads for many reasons. They furnish practically all of the eastern and tidewater coal traffic, and they furnish the longest western haul, and therefore, all things considered, the most valuable western tonnage. The quality is such as to give a world-wide reputation, and they alone, of all the coals on their lines, present the possibility of export trade. Finally, they are peculiar to these lines. There is no question that the success or failure of these roads is bound up with the prosperity and development of these particular coal fields, and a comparison of such development is a measure of the efficiency of all the agencies which have operated in the past with reference to such development.

Before making any comparisons, it is necessary to bear in mind the local conditions of the two fields, and the natural conditions which will always exist as factors. There are compensating advan-

tages which place the two roads and the two fields on almost identical footings. Their coals, which come from the same geological measure, are almost identical in physical and chemical characteristics, the slight differences in the latter particular being in favor of the New River product, it averaging slightly lower in ash and sulphur. The Pocahontas coal will average a thicker seam, and under similar conditions it can always be mined somewhat cheaper, but the advantage in grades which the Chesapeake & Ohio has over the Norfolk & Western, both east and west, more than offsets this. In other words, the operator in the New River and Pocahontas regions can furnish coal at cost, and the two roads can deliver it into the principal competing markets so as to bring the same price, and the Chesapeake & Ohio will get more profit than the Norfolk & Western.

To put it in another way, these roads carry practically the same coal into the same markets and offer it at the same price. It is interesting to note their several developments, and if possible trace out the causes which have influenced them.

In 1883 the Chesapeake & Ohio had a market for 450,000 long tons of this coal and coke. It had connections both east and west.

In 1883 the Norfolk & Western made its first shipment. It had no western connection.

In 1884 the Chesapeake & Ohio handled 484,000 tons. The Norfolk & Western 272,000 tons.

In 1885 the Chesapeake & Ohio handled 713,000 tons. The Norfolk & Western handled 652,000. In 1892 the Norfolk & Western got a western outlet.

In 1893 the Chesapeake & Ohio handled 1,250,000 tons of New River coal and coke. The Norfolk & Western handled 3,000,000 tons of Pocahontas coal and coke. The output of the New River district had increased in 10 years but 800,000 tons, while that of the Norfolk & Western had increased nearly 3,000,000 tons.

The gross earnings of the Norfolk & Western in 1893 was \$10,032,000, with net earnings of \$2,833,000. That of the Chesapeake & Ohio was still in excess, being \$10,336,000 and \$3,204,000, respectively.

The banner year of the two districts in regularity of work was in 1902. In this year the Norfolk & Western hauled from this Pocahontas field 6,213,000 short tons of coal and coke. The Chesapeake & Ohio Railway hauled from New River 4,269,000 short tons.

The relative output of the two districts seems to measure the development of the railroads. In the nine years the Norfolk & Western has passed the Chesapeake & Ohio and increased its gross earnings to \$17,554,000 and its net to \$7,416,000, while the Chesapeake & Ohio has reached \$16,524,000 and \$6,126,000, respectively.

Within these nine years there has probably been expended on the line of the Norfolk & Western road \$20,000,000 to \$30,000,000 more than on the Chesapeake & Ohio, which was made possible by the difference in the amount of this coal produced.

In the fiscal year 1902-1903 there was a strike in the New River field, from which the Norfolk & Western operators, by their better organization, were exempt. The effect, as shown in the earnings of the two roads, is remarkable. The Norfolk & Western gross earnings reached \$21,160,000 and the net \$8,463,000, while the gross of the Chesapeake & Ohio was less than the Norfolk & Western by nearly \$4,500,000, and its net was \$500,000 less than in the previous year—this, too, in spite of a maximum tonnage of other freight at good rates, and when the oper-

ating expenses were being vigorously curtailed.

A strike is usually defined as something "beyond control," and so are the waves of the sea if by patient and persistent effort provision is not made in advance to meet their onslaught. Yet it is history that a boy's hand has held them back. A disastrous strike never occurs without raising the question whether it is not the natural result of some mistaken line of policy in the past, of some failure in peace to provide for war.

Is it to be wondered at that the Norfolk & Western Railroad is looked on as one of the most valued of the possessions of the Pennsylvania road, and that no one of its officials and no student of industrial affairs but predicts for it a great future? Is it to be wondered at that every effort will be made for its development, every facility be furnished for its improvement, and that money and influence of the most potent kind will stand ready to minister to it? It is this danger which is faced by the Chesapeake & Ohio, its management, its stockholders and its patrons, that those who dictate the policy and furnish the resources for the two roads may do more for the Norfolk & Western. To him "that hath shall be given, and from him that hath not shall be taken away even that which he hath." Is it not human nature to put your money and effort where experience has shown you will get the best returns? And will not those who are only interested in the Chesapeake & Ohio Railway have themselves to blame if they do not use every effort to demonstrate the great opportunities which that line presents? There is today within the reach of its friends an opportunity worthy of serious consideration.

A road has to be considered as a whole. A successful road can do for its patrons what an unsuccessful road cannot do. It can furnish better and safer and cheaper facilities of all sorts. There is no shipper of a bag of peanuts on the Chesapeake & Ohio, no local passenger of a half-dozen miles' ride, who is not naturally interested in the success of that road, and the success of that road is inevitably involved in the continuously profitable development and rapid extension of the output of the New River coal field.

There have been obvious differences in the policy which has dictated the handling of the coal trade on these two roads, which have possibly been sufficient to account for the great difference in results.

From the inception of the business until 1898 the coal trade of the C. & O. was handled by that road or its agents. The first operators who went into the field were comparatively limited in resources and experience, and their thoughts were necessarily confined to the horizon of the local trade, and it was as natural as it was necessary that the road should aid in the development of the through trade so essential to its life, and should take charge of it. The road bought the coal from the operator and sold it on the market; the difference, after deducting the selling charges, was its freight. The agent in charge of this work was but the purchasing agent of the railroad, and only acted as the representative of the operators to the extent that his breadth of vision might enable him to recognize that their interests were identical. To a superficial observer it would look as if he would serve his road equally as well whether he got 10 cents more for his coal or bought it for 10 cents less. Apparently this was the principle followed. It was easier to fight the operator than the general market, so the purchasing agent fought the operator. Even a moment's thought will show that this was wrong. In the one case he adds 10 cents to the resources of his patrons, or, what is the same thing, the resources

of his road; in the other case he subtracts 10 cents. Not that the road did not make great sacrifices at times in the way of freights—hauling coal at less than has been done elsewhere in the world. At the same time they report that there was always a small profit, while there were years in which the operators as a whole lost money. But the reduction in price is but one of the ways of securing a market, and of all the ways the most unskillful and most wasteful, while, like an alcoholic stimulant, it induces a demand for additional concessions. Anyone can cut prices, and the reason it is so seductive is that anyone can tell the difference between 90 cents and \$1; but it may take time, effort and education to satisfy a buyer that one coal is five cents a ton better for his purposes than another, even if it be equally true. The successful handling of such a proposition involves a talent not inferior to that required for the management of the road itself, an abundant means, an enthusiastic belief in one's product, and such identity of interest as will warrant building for the distant future. With these as a foundation, and with a reasonable time and the liberal but wise expenditure of money, would be developed a perfect organization, with a reputation for fair dealing and intimate knowledge of general conditions, and of the special needs of the particular trade sought, and a persistent and never-ending effort to educate everyone as to the superior merits of its product. Only by such methods can results be obtained commensurate with the present needs and future operations of the road and the coal operators.

Up to 1898 the policy of the Chesapeake & Ohio was foreign to all of these things. It fought the operator instead of the market, and sowed dissensions among the operators by secret and individual contracts; it helped certain operators in such a way that they secured permanent advantages in the way of mining rates, and thereby developed inequality of conditions which prevented the operators from dealing as a whole and to the best advantage with strike conditions. The matter may, however, be summed up by the statement in one of the reports of the road that they had not pushed their coal business like their competitors, and the statement of one of the principal agents, who said: "Let the other fellow advertise, and we will get the business."

The coal of the Norfolk & Western has been handled on an entirely different basis. The sales organization has been the same from the beginning, and has pursued consistently the same line of policy. It has fought the market rather than the operators, and has brought to this effort a perfect organization and a systematic and comprehensive scheme of advertisement which has never been excelled and has caused the Pocahontas coal to be favorably known in every quarter of the globe. The operators have been treated substantially alike, and have therefore been taught to co-operate in all matters concerning the district as a whole. The result has been that strikes have been infrequent and of short duration, and usually after the general periodic labor disturbances which seem inseparable from both rising and falling markets, the district has emerged with ever-extending markets. Their agents have been very like the busy bee:

She seizes everything in sight
And drags it home with all her might,
And what she takes, she keeps.

Which plan is best? Which has produced the most fruit?

In 1898 the dissatisfaction was so general that the Chesapeake & Ohio retired from the coal business and turned over its selling agency, together with a number of

very disastrous contracts, to a loosely-bound organization consisting of most of the operators of the field. This eliminated some of the difficulties, but the agency as a whole was conducted along the same old lines, and an abortive effort was made to better the conditions, but without success, and left a feeling of unrest and dissatisfaction. In spite of this, during the period of rising market and a universally large demand for bituminous coal, the results were fairly satisfactory until terminated by the strike of 1902-1903.

At the beginning of 1904 the rope of sand has finally broken. In a year of general demoralization of the coal business, and just after a large share of the normal trade of the district has been diverted by a prolonged strike, and when every energy should be bent in the direction of retrieving the disaster, a large amount of the energy of the operators is expended in fighting each other and in criticising each other's actions and product. There are half a dozen agents. Their principal argument is to cut prices—the argument most common to a crude and imperfect organization. Coal is already offered from the district at much less than the cost of production. Absolutely no one is or has been for some time undertaking to work along the broad lines which are so necessary for the proper upbuilding of the district as a whole. Who can afford to do so when his tenure of interest is so short and uncertain, and when he must be fighting so continuously for the rapidly dwindling present market?

It is hardly necessary to ask what will be the effect of such action. It is evident that it will be worse than in the past. Without giving further details, do not these statements, which are true, show that the district is in a frightfully demoralized condition, which means a loss of present and future markets, a loss in present and future profits? And does it not mean a loss of prestige which will affect all of the demands which may be rightfully made on the railroad for better facilities and service? For how can the railroad have faith, under such circumstances, in what the future will bring forth?

On the other hand, does not the railroad see, as a result of existing conditions, a loss of tonnage and an enormous increase in costs? Does not the management see a loss of reputation from the failure to get out of the road what it should be producing? And how can it make those large demands on the treasury which are required for farseeing and comprehensive improvements, unless it can point to stability of conditions in the industry, which is the basis of the traffic of the road?

In the present crisis no halfway measures are possible. The only thing to do to protect the district against enormous and continuous loss is to organize the mines into a compact and permanent ownership. All of the strongest features of the present selling agencies of the New River coal should be combined into one body, to be changed, modified and extended as may be best to form the basis of a perpetual organization. A beginning must be made of a comprehensive scheme of general and continuous advertisement, for this work would be for all time, and then the district would be in a position to call on the Chesapeake & Ohio road for whatever facilities may be necessary for the effective and economic conduct of the business, and for general co-operation in all of their plans. When this is done they will not have to call in vain. With such organization and such co-operation there is no coal region in this country which presents a better opportunity for safe and profitable mining operations, and there is no railroad stock which would prove a better investment than that of the Chesapeake & Ohio.

Staunton, Va.

TO BUILD UP LOUISIANA

Needed Outside Capital and Labor Will be Welcomed.

[Special Correspondence Manufacturers' Record.]

Baton Rouge, La., April 9.

Governor W. W. Heard of Louisiana is one of the distinctively active forces in Southwestern development, and during his administration, which is nearing a close, he has devoted as much or more time and energy to the industrial and agricultural betterment of the Creole State than he has to political matters, although from a political standpoint the State has never had a more satisfactory governor.

Born and reared on a plantation, independent in wealth, of smooth and equitable temperament, keen of foresight and progressive in spirit, Governor Heard has played politics as much from patriotic motives as to serve a laudable ambition, and within a short time he will retire to private life with the love and admiration of the people of the entire State. In an interesting interview with me today, Governor Heard said:

"The department of agriculture of Louisiana is not headed by a single commissioner, but a live, progressive board headed by Gen. J. G. Lee, commissioner; Hon. N. S. Dougherty, secretary, and Hon. Charles Fuqua, immigration agent, and several other members, including myself. That department of the State service is active, and has accomplished much for the development of our agricultural, mineral and timber resources. Some years ago the department issued a 100-page pamphlet listing by parishes and postoffices 6,500,000 acres of land for sale in the State, giving a description of the land, its price and owner. This pamphlet was extensively circulated, and has been the means of bringing many thousands of desirable citizens to the State. We now have in press a revised edition of the pamphlet, which will be sent to the numerous inquirers, who are daily writing for information about Louisiana lands, in addition to a general distribution.

"I agree with the view expressed by some of the correspondents of the Manufacturers' Record that for some time yet to come a large part of the capital and labor for our industrial development and manufacturing will have to be brought from abroad, as our own people are wedded to the pursuit of agriculture, and with the prosperous conditions existing in the cotton, rice and cane sections, will be content to improve and enlarge their farming operations. There is no doubt but what they are willing to invest their surplus money in industrial enterprises, but as they are not manufacturers, and have little labor to spare from the farms for factory employment, they will pursue the policy of inviting experienced manufacturers and skilled labor from the outside to join them in the development of our industrial resources, which, by the way, are many and attractive to capital. In time our own people will become better acquainted with industrial matters and the profits of manufacturing and enter such lines themselves, but for the present they will give their own energy largely to farmers. To illustrate the difficulty of inducing a cotton-raiser to engage in anything else, I can give you an interesting instance. Last year the boll-weevil appeared in a small area in the Louisiana cotton section, and we undertook to check its progress by abandoning the use of the land in its range for cotton-raising, and a commission, of which I was a member, took the matter up with the farmers cultivating the land and tried to get them to plant something else. The first question put to the commission was, 'if we don't raise cotton, what will we raise?'

We suggested corn, alfalfa, cane and everything else that would grow on the land, but each one met a strong objection, and in the end we decided just to rent the land from them for a term, let it remain uncultivated, and let them do what they pleased. The commission had police powers, and could have compelled the discontinuance of cotton-raising on the land, but I did not think it was fair to make a few individuals suffer for the benefit of the public. This will give you an idea of how little danger there is in industrial development making any serious draft on the cotton labor of this section. As I say, however, when our industrial development reaches a stage that our farming classes become better acquainted with that class of work and the profits that it offers, they will undoubtedly engage in it to a considerable extent.

"This, though, will take time, and the foundation will have to be laid by capital and manufacturers from the outside. For this reason our people should make the outside world and manufacturers as well acquainted with our resources as soon as possible. Then again, under the favorable agricultural conditions existing in this section and the profitable demand for our farm products, it is better policy for us to bring as much of our industrial developing strength from the outside as possible and leave our own people to the improvement of their farming interest, which is both profitable and to their taste and training. There is room in Louisiana for all and fortunes to be made in both farming and manufacturing by our own people and thousands from other sections, which we will gladly welcome to share our happy State."

On the subject of Italians as cotton-raisers and farm laborers, Hon. N. S. Dougherty, secretary of the Louisiana State board of agriculture and immigration, who is a large cotton-planter, gives an interesting interview. Mr. Dougherty says:

"I have about 40 Italian families working on my cotton plantations, some as renters and some as day laborers. I find this labor much more satisfactory than negro labor. They are provided for the same as negro labor, and are given the same opportunities, but they work better than the negro, keep their fields cleaner, take better care of their stock, are more economical, and it requires considerably less to carry them during crop-growing, as they are much more economical. As laborers in the fields they are tractable, obedient, giving little trouble, and do not quarrel among themselves or with the other labor on the plantation. They start in without any money, and usually save enough off the first crop to carry themselves thereafter. They keep apart from the negroes in a social way, and attend strictly to their own business.

"Those who have been most successful have within four years bought their own farms, paying \$40 to \$50 an acre cash for the lands. They do not go to town to engage in fruit peddling and kindred occupations, as I expected, but appear to be born farmers, living on their lands and producing everything that is required for home consumption, both for themselves and their stock. In addition to their cotton crops, their gardens and pastures are models.

"I have used them for all sorts of farm labor on the plantation, such as clearing lands, ditching, building and the cultivation of cotton, corn and cane, and their

work is up to the high standard of labor in every capacity. It sometimes happens that in order to save my individual cane crop in severe weather, when I find it much more comfortable in the palatial State Capitol than in the field, the Italians always respond promptly and willingly, and do the work as well and as satisfactorily in my absence as if I were present.

"I regard the Italian laborers as well adapted to the development of this matchless Southern country, and believe with proper training that they will be found as satisfactory in mills and factories as they

are on plantations. They learn to manage farm machinery, sugar-house machinery and other mechanical devices easily, and as they are obedient and obey orders, they soon learn to understand all instructions of the foreman. When factories come to the cotton belt, which they undoubtedly will in the near future, these Italians, many of them, principally those raised in this country, will furnish a large part of the labor, and if I am not mistaken, the character of their work will prove much more satisfactory than a great deal of our local labor."

LEE J. LANGLEY.

NEED OF SAVINGS BANKS IN THE SOUTH.

By EDWARD ATKINSON.

[Written for the Manufacturers' Record.]

An amendment has been asked of the national bank act to permit loans on the mortgage of real estate of a part of their resources—a dangerous move. The deposits in commercial banks are the current funds of persons occupied in active business, subject to call at any moment. Their investment must of necessity be in what are called quick assets; that is to say, in the obligations of business men who meet them by the sale of goods of constant demand, or else in loans upon stocks and bonds of ready sale in the stock market, payment of deposits being further assured by a reserve of cash more or less adequate, according to the skill and prudence of the bank managers.

An investment of commercial bank assets in mortgages on real estate at long date not subject to call meets none of the conditions named. The more urgent any sudden call upon banks for cash, the less able will they be to realize cash by the disposal of mortgages then unsalable. These mortgages may be perfectly safe as investments, but no safer on the average than other bank assets have proved to be. The losses of banks by bad debts on commercial paper do not amount to 25 cents on a hundred dollars of loans; in fact, they are much less.

Yet there is a great need in the South of funds that may be lent on mortgages of real estate, and there is a vast fund, especially at the present time, in the South awaiting the opportunity for such investment. All that is needed to bring the demand and supply together is the organization of savings banks corresponding to those which have been long tested and not found wanting in the East, and especially in Massachusetts.

There are now men of ability in almost every Southern State of high character fully competent to administer such banks, who have become accustomed to combine and to act together in other enterprises of large scope.

The savings banks of the East are administered by unpaid trustees, who choose the executive officers, fix their salaries, often large in the great banks, and who direct the investment of the money under the provisions of the statute by which their choice is limited to what are assumed to be the safest.

The list of permitted investment includes:

- 1st. Mortgages on real estate.
- 2d. Specified classes of railway bonds.
- 3d. Certain specified classes of national, State and municipal bonds.
- 4th. Personal loans on specified collateral security.
- 5th. Loans to manufacturing or other corporations endorsed or guaranteed by individuals of approved credit.

The permitted investments vary in different States. This is a general statement.

Some years since I made an analysis of the savings banks of Massachusetts from

the beginning. It proved that the losses by bad investments of the funds had been less than a tenth of 1 per cent., or 10 cents per hundred dollars, on a sum amounting into billions of dollars. When occupied in manufacturing I have myself been an officer of corporations that borrowed from savings banks many million dollars.

I append a short statement of the condition of the savings banks of Massachusetts, taken from the annual report for 1902.

It is sometimes affirmed that a large part of the deposit belongs to people of considerable property. It is not possible to define the proportion. In my own judgment, at least three-fourths, probably more, stand for the savings of working people, using that term in its application to mechanics, factory operatives, clerks, salesmen and saleswomen, domestic servants, laborers and other wage-earners.

If I am right in stating that in the South a large fund widely scattered in small sums is awaiting concentration; that a large demand exists for loans on safe mortgages, and there are a large number of Southern men of high character and capacity competent to organize the supply and demand to the benefit of the whole community, what is it that stands in the way?

Report of the savings banks of Massachusetts for 1902:

Number of banks, 186.

Number of open accounts, 1,660,814, in a population of less than 3,000,000. Deducting persons who may have several open accounts, about one open account to each two inhabitants.

Assets, \$624,945,574—an average of about \$400 to each depositor, after allowing for duplicate accounts; a little over \$200 per head of the total population.

Principal investments in round figures: Public funds, \$70,000,000.

Railway bonds and loans thereon, \$100,000,000.

Loans on real estate, \$255,000,000.

Loans on personal security, \$130,000,000.

I have not the figures of 1903 at hand at the moment, but they show about the customary annual increase.

Boston, March 28.

The Norfolk (Va.) Dispatch has displayed much enterprise and public spirit in issuing a Jamestown Exposition Edition of more than 175 pages. The edition, which is, in fact, a book, deals not only with the many advantages of Norfolk as a manufacturing, commercial and railroad center, but with Berkley, Portsmouth, Newport News and other communities upon Hampton Roads, and with the historic attachments of Jamestown and Williamsburg. The plans for the exposition at Norfolk will make this publication in great demand, as it is a permanent reservoir from which to draw information about Norfolk and its vicinity.

SOME SIDELIGHTS ON THE SULLY CASE.

By THOMAS P. GRASTY.

[Written for the Manufacturers' Record.]

In the daily papers of April 12 appears as a minor item the statement that a demurrer had been entered to the petition in bankruptcy filed several weeks ago by some of the creditors of the firm of D. J. Sully & Co. This step, apparently of small importance, may prove the beginning of a battle in which the opposing forces may be the growers of the South on one side and the New York Cotton Exchange on the other; and if some rather shrewd lawyers hereabout be correct in their conclusions, the overthrow of the existing system of dealing in contracts for the future delivery of cotton may be the final outcome.

It has been intimated in the newspapers and openly declared by Sully's friends that the "powers that be" of the New York Cotton Exchange were determined to prevent any settlement between Sully and his creditors, not because Sully's offer is not the best he can make, but because, from their point of view, Sully is "a dangerous man" to be allowed on the Exchange. "Why is Sully dangerous?" I asked a member of the Exchange. "Oh, he tried to bore with too big an augur. He tried to buy more than he could pay for." "But suppose," I asked, "the notice of suspension had been read two minutes sooner and settlements had been made on the average prices of that day, thereby making a difference of say \$1,636,000, then it couldn't have been said that he had 'overtraded,' for he would have been able in that case to pay dollar for dollar so soon as he could have got in the money due from his customers?" "Yes, but the notice wasn't read till two minutes after two."

And thus, on so unsubstantial a trifle as two minutes' delay in the reading of a notice, Sully is saddled with more than \$1,600,000 of alleged liability which he did not dream of when he said, "I have bought all I can pay for, and must have time to get in what is owing to me in order to pay for what I have bought." That, in brief, was what the notice of suspension meant. On such a flimsy pretext is based the accusation that Sully is "a dangerous man" to be allowed to do business on the New York Cotton Exchange. The rule, it seems, says that if a notice of suspension be read within an hour of the close of trading, settlement shall be made on the average prices of that day, and it is stated that trading continued for an hour and three minutes after the notice had been read, i. e., till five minutes after three. But it is stated that while this after-three-o'clock trading was recognized as a part of the day's transactions in the reports that went out to the world, it is not to be counted (so some of the creditors assert) in figuring the time that trading went on after the reading of the notice.

I am advised that in all this the gravest legal questions are involved, and that when the argument on the demurrer comes to be heard early next week some very interesting developments are expected. The question of the notice, the legal effect of the exact time when it was read, or whether, indeed, it ought to have been read at all, will be exhaustively considered, and the legal rights of the New York Cotton Exchange in respect to "selling out under the rule" the contracts of its members will be searchingly inquired into before Sully's case is finally adjudicated by the federal courts.

It has been boldly stated time and again that the New York Cotton Exchange is essentially a "bear" organization, and that its operations are chiefly directed against fair prices to the growers. To what ex-

tent this is true is one of the burning questions of the hour.

If it shall be shown that the real reason why so uncompromising a spirit has been exhibited in Sully's case is not to get a better settlement, but merely to keep so aggressive a "bull" leader out of the market, then Sully's cause instantly becomes the cause of all the cotton-growers of the South. It is more than likely that some of the big "bears" will look with a feeling close to contempt on the suggestion that the cotton-growers may be able to do something in the way of self-defense. It is almost second nature to those who have had their own way for years and years to think they will be able to keep on having their own way to the end of the chapter. And as a rule that is not an unjustifiable way of thinking.

Many a good cause has failed of success through lack of a leader. But if it shall be demonstrated by and through the legal fight Sully's lawyers have so quietly begun by filing this demurrer, that the "bear" element controls the machinery of the New York Stock Exchange, and that that institution is hostile to the interest of the cotton-growers, there will be no lack of leadership in the fight that will follow for fair-play all along the line.

IRON MARKET HARDENING.

Industrial Conditions in the Birmingham District.

[Special Cor. Manufacturers' Record.]

Birmingham, Ala., April 11.

The firmness noted in iron in last letter has been well maintained, and in some cases an advance was established. This advance was not general. But it shows the hardening tendency of the market, and it would require but a moderate demand to stiffen the market on all grades. As it is, some of the interests are withdrawn from the market on all the grades, and are refusing to quote under any circumstances. The result is an unsettled market. The reason for this condition is in heavy sales made in the immediate past, when some of the interests sold fully up to anticipated output for this quarter. In such cases there is nothing to do but to await the course of events. The demand was, as a rule, mainly for delivery this quarter, but the inquiry for the third quarter showed an increase which the furnace interests were not inclined to encourage. There may have been a few cases in which quotations were made, based on current values, but as a rule an advance was asked, which demanded an increase of from 50 cents to \$1 per ton. No business was reported as concluded, and if any was concluded it was of an insignificant amount. Several sales of No. 2 foundry were reported at \$10.25 for prompt and nearby delivery, and there were several sales reported at \$10. But the aggregate of all was not large. The cause of the limited business was the refusal of the furnace interests to accept the orders offered. No. 3 foundry was sold at \$9.75 regular, which means commissions deducted, netting about \$9.50 to the furnaces. There were also sales at \$9.50 regular, but there was more business declined at this price than was accepted. Your correspondent ran upon one lot of 1000 tons of No. 3 foundry owned by an outsider that was on the market at \$9.75 net, which was about \$10 regular. At the close of business Saturday it was unsold, but the prospects for obtaining that price this week are very encouraging. For gray forge there has been and there is yet a fine demand, and it is quoted from \$9 to \$9.25, with little or none to be had. The market can be said to be in fine

condition so far as sales have been made, and the sellers are in an independent condition as to amount unsold. Stocks are rather ragged, and certain grades are simply unobtainable.

One of the leading interests sold during March about 140,000 tons of iron, and has in stock only about 40,000 tons against it. As the sales were largely for this quarter, they will be put to it to meet their deliveries, and will be practically out of the market for new business until buying commences for the third quarter. As to the current output, we are turning out about half our capacity. This could be increased with very little delay, but at current values there is no inducement for the majority of those furnaces now idle to resume operations, and it is not probable that capacity will be increased. Prices would have to increase at least \$1 per ton before there would be any stir in that direction.

During the past week there were several orders ranging from 1000 to 2000 tons at market rate declined, simply because the iron was not available. Some large interests who were belated as to time were turned down. There has been a very limited speculation in the market, so that only a small part of the iron sold will come on the market for resale.

The pipe works have all secured large contracts for pipe from both the domestic and the foreign markets, and the season promises to be one of continuous activity for them. Some of them have practically covered their requirements for this quarter. But there is always held back an appreciable amount of business on which the chances are taken as to results. This course will bring this interest into the market again sooner or later to supply these deferred requirements and add to the activity that is now full of promise. It cannot be possible, judging from the condition of the sales books, that we will go into the third quarter with any surplus of stocks, and when that is thoroughly understood by the buyers we will have another scramble for iron. At any rate, the selling interests here are in an independent position, and can afford to view the situation with equanimity.

The steel works have now seven of their open-hearth furnaces in operation, and will soon be going in all their various departments to full capacity. They have had trouble with their labor, but have replaced the majority of the malcontents, and are gradually bringing affairs to their normal condition.

The bar and rod mill will resume operations this week. They have been accumulating supplies for some time in anticipation of this event, bringing their steel from the Pittsburg district. The reopening of these works has stimulated affairs at Ensley, and activity in real estate has largely increased. Of late some handsome contracts for sugar machinery have been made to go to Cuba, as well as contracts to Mexico.

The orders for Corliss engines have materially increased of late, as well as business for other makes. In miscellaneous work the same favorable reports are current, and all report a very much improved condition over what prevailed a few weeks back.

The report of the Southern iron committee for March, though not yet officially promulgated, is said to be the most favorable ever issued by them.

The site is being cleared for a six-story hotel opposite the postoffice, which is to cost \$100,000 and to be a model hostelry in every respect.

Work on the great sanitary sewer will now be prosecuted rapidly, as a contract was let the past week for an important section, and which will soon be followed by another letting, completing the full

length of the enterprise. At the letting last week 10 firms participated in the bidding, and the successful contestant was a Texas firm of contractors. J. M. K.

Southern Machinery Dealers.

At the opening session of the convention at Old Point Comfort of the Southern Supply and Machinery Dealers' Association the address of welcome was made by President Wyndham R. Mayo of the Norfolk Chamber of Commerce. Captain Mayo sketched the revival of the South since the war, and said:

"While 39 years ago this old South needed nothing of your supplies and nothing of your machinery, she now taxes you to the utmost to supply her with both. You have none the less contributed your fair share to this grand achievement. Therefore in your organization you are a concrete living evidence of this achievement, and as such coming to us you are welcome."

Other addresses on the program were by Messrs. John G. Christopher of Jacksonville, C. H. Briggs of Dallas, George T. Coppins of Boston, S. Milner Price of Norfolk, C. B. Carter of Knoxville, Thos. Sloo of New Orleans, Levin Joyner of Richmond, W. H. Kettig of Birmingham, Kennedy Cromwell of Baltimore, Thomas W. Fritz of Chattanooga, John Derby of New York and E. L. Stream of New Orleans. These addresses bore upon the progress made by the association during the past three years, its relations to the manufacturers and to customers, and to the prospect of the trade. For the entertainment of the convention a luncheon, a reception, a smoker, a dance and an excursion around Hampton Roads were arranged.

Paper From Cotton Stalks.

Hon. William M. Howard, member of Congress from Georgia, has been kind enough to send to the Manufacturers' Record a specimen of fine note paper made from the stalk of the cotton plant. In a letter to the Manufacturers' Record he writes:

"About two months ago I requested the agricultural department here to investigate the subject of the manufacture of paper from cotton stalks, and to publish the results in a bulletin, the investigation to ascertain if it was now being done, where and how, and with what results. This investigation is now going on, and so far has resulted in finding out that paper is being made from cotton stalks in Atlanta, Ga., by Montag Bros. The sample of it which I send you was procured by the department. I have no interest in the subject except to have all the information obtainable procured and given publicity in the cotton States. It looks as if paper from cotton stalks is a success, and there are millions in it."

Glass Works for Asheville.

Mr. George A. H. Shideler of Marion, Ind., is a representative of capitalists of that State who are considering the purchase of an interest in the plant of the Weaver Power Co. of Asheville, N. C. These gentlemen have been extensive manufacturers of glass, using natural gas for fuel, but with the passing of that fuel they have turned to a process whereby electricity has been applied successfully for melting the ingredients of glass. The only drawback upon this process is the cost of the electricity, but it is thought that its generation by water-power will solve the problem. If this proves to be the case, and the deal with the Weaver Company is made, a bottle factory employing about 300 men would be removed from Marion to Asheville.

THE REBUILDING OF BALTIMORE—VIII.

By ALBERT PHENIS.

[Written for the Manufacturers' Record.]

At the Belvedere on Tuesday evening, April 19, there will be a meeting of the Credit Men's Association of Baltimore, held for the special purpose of stimulating concerted effort in behalf of a greater Baltimore. There will be a dinner in the Belvedere banquet hall, and afterwards there will be speaking in accordance with a carefully-prepared program. Mayor McLane, Major Venable, Mr. Summerfield Baldwin and others are in the list of speakers, and a very general discussion of plans to benefit Baltimore will occur.

This will be the first general gathering of Baltimore business men since the conflagration, the first time, in fact, that many of them will have met at all since the fire, for each man has been absorbed in his own problem of dealing with a trying situation, and neither time nor opportunity has been given him for a meeting with his fellow business men.

The Credit Men's Association comprises in its membership many of the most active and enterprising of the younger business men of the city. While a movement such as the meeting of the 19th will inaugurate is not strictly within the scope of the association's objects, yet in the broader sense that everything affecting the welfare of Baltimore's business is of vital importance to its membership, it is felt that a step such as this is not only justified, but highly desirable at this time. The Manufacturers' Record has for some weeks urged the suggestion that the business men of the city get together to formulate a plan for the more speedy rehabilitation of Baltimore, and it is expected that out of this meeting there will come a realization of that suggestion.

I have talked with Mr. Baldwin, Mr. Thomas Todd, Mr. Henry Tregoe and others interested in the meeting, and find a very earnest intention to enlist the merchants and practical business men of Baltimore in a combined effort to improve the conditions under which the business of the city is now being carried on. With all possible credit to those who have borne the brunt of the struggle to put Baltimore in shape for rebuilding, it is felt that there is no question about the urgency of speedier action at this time. After nine weeks the burned district is still a mass of forbidding ruins, into which no customer would go to trade, even were there stores there ready for occupancy by tenants, and if individual effort is to be relied on to the end, it is felt that months must yet elapse before conditions will warrant any general attempt to reoccupy the district. At the cost of heroic effort, immediate action and great extra expense, such houses as Daniel Miller & Co., R. M. Sutton & Co. and John E. Hurst & Co. jumped into the breach immediately after the fire with the determination to hold Baltimore's trade. They have performed a vast work in that direction, and with a generous response on the part of Southern merchants Baltimore has lost wondrous little of the trade that was hers. But it is realized that generosity and good nature have their bounds, and even if the Baltimore jobbers could indefinitely continue to do business in cramped, inadequate or somewhat inaccessible quarters, in competition with merchants elsewhere who have all the facilities that can be devised, there is likely to be a serious falling off in the disposition of country merchants to put up with the inconveniences and discomforts they may find here for two years to come, unless

there is a marked increase in the degree of activity everywhere shown throughout the burned district.

While delays in the adjustment of insurance losses and hesitation due to the unsettled street-improvement plans have operated until recently to hamper action, and while by no means all the insurance cases have been disposed of yet, it is still felt by a large and increasing number of property-owners and business men that some more adequate and time-saving plan might be devised for cleaning out the burnt district. The opinions of several engineers on this subject were quoted by the Manufacturers' Record so long ago as March 3, wherein it was urged that the city take hold of the problem of cleaning up, so that the work might be done in a wholesale way by the use of steam shovels, cranes or overhead trolley, with steam railroad tracks laid down in any streets required. Thus, it was pointed out, the work might be done at a much smaller expense to property-owners, and in a fraction of the time that would be otherwise required.

Also the subcommittee on removal of debris, consisting of Frank A. Furst, chairman; F. W. Wood, Francis T. Homer, Geo. L. Potter, Geo. C. Wilkins, F. S. Landstreet, Thos. McCosker and Milton Snowden, reported to President Wm. Keyser of the emergency committee on February 18 that "as soon as the district is made safe by the removal of dangerous walls and buildings the property-owners ought to be given a reasonable time to clear away the bricks and debris from their sidewalks, and upon failure to do so the city should, under its police powers, remove the same and charge the cost to the property-owner."

There has been a considerable degree of individual activity in the way of cleaning up lots in the burnt district, but a liberal estimate of the lots cleared is not over 10 per cent., and taking 1400 as the number of lots in the district, the cleared spaces will hardly reach 10 per cent. If, however, 10 per cent. has been done in nine weeks, it may be counted on taking 90 weeks more to clear the whole district, for while there will doubtless be a rush by many during the summer to get building operations started this season, it is true that a number of property-owners have already declared their intention not to rebuild at all, and in such cases it is hardly to be expected that any effort will be made at any time soon to clean up such lots. Furthermore, it is improbable that enough teams and men to do very rapid work will be provided by individuals.

Any contractor of wide experience in such work could be secured to clean up the entire district in 90 days' time. This would take 5000 or 10,000 men and ample equipment. It thus resolves itself, it would seem, into a question of whether it shall be 90 days or 90 weeks.

This is one aspect of the situation that will be discussed at the meeting of April 19, it is said. By many it is regarded as of fundamental importance that the district be cleared up, and that right early. This for three reasons—as an advertisement, for convenience and for health. In 10 years from now, or 20, it may have been largely forgotten whether it took Baltimore one year or five to rebuild, notwithstanding the consequences will abide forever. But there will be another generation of business men here and in the South. For the benefit, however, of people who are now on earth, for the far-reaching

effects on those who are enduring the struggle here today, it is of incalculable advantage that there be retained as much as possible of the good opinion the public formed of Baltimore pluck when the heroism shown in the first dark hours of the calamity were heralded to the world. It is contended by some that the progress so far made toward recovery is very creditable, and that no time has been wasted. Maybe so; but I have heard no one claim that anything phenomenal or strikingly enterprising has been done in that line. It is the big things that count. As an advertisement it would be worth nothing at all to say it did not take Baltimore two years to remove the debris; but it would be worth big money to be able to say "in 90 days from the fire the city was cleaned up." Quick action now would save some of that prestige; one month hence the opportunity of getting any glory or advertising out of the achievement will have forever fled.

For convenience in getting over the burned district, through the streets, and to the houses which may be made ready for occupancy, the cleaning up of the district at once is most desirable. It is a comment heard on every hand that until the streets are made passable there is no inducement to rebuild or repair. In the main the sidewalks there are destroyed or buried, and the streets are muddy when it rains and thickly covered with dust a few hours thereafter. Passing carts of debris are constantly scattering more rubbish on the uncleaned streets, and under present conditions this would last for months to come, growing worse as the activity increases. Sightseers and laborers infest the district now. The trust companies will tell you by their safety-deposit rents how little the people of the city go into the district on business. Whoever walks half a dozen blocks in the district now needs a porter to brush him into presentable form.

When the rebuilding activity begins—and it will be well under way within sixty days—there will be the added congestion of travel which the hauling of new materials entails, with a delay and inconvenience which would not occur if the men and teams removing debris were finished and gone.

These considerations are recognized by business men, property-owners and builders generally. The burnt district commission sees them, too, but the hands of this body are tied by the limitation of powers conferred by the organic act. The commission can legally do nothing, and will not make an attempt. The only power that can be invoked rests in the mayor's hands, and the consideration that can make him act is the public health. There are differences of opinion as to whether the burnt district will become a menace to health. The health officer says no, and up to the present Mayor McLane has accepted his opinion as conclusive. Whether fevers will result from the failure to clean up at once in a wholesale way it will take a summer's experience to positively prove. The mayor thinks the open cellars that would remain were the debris to be cleaned out at once might, by becoming filled by rains, be a greater menace to health than if filled with debris, as at present. There is room for argument on that score, if not for dispute as to the premises, and anyhow, it seems to me there would be greater value to the objection if it were assumed that the open cellars were to become a permanent feature. One of the reasons for a speedy cleaning up of the district, as I understand it, is that this would facilitate the work of rebuilding, would hasten it along, so that the number of open cellars ought to rapidly "grow smaller by degrees and beautifully less."

But there is one feature of the health consideration about which no disagree-

ment can exist. Waiving the stench of stale smoke, which is said to be rather more healthful than otherwise—but the liking for which must assuredly be an acquired taste—it is certain that under present conditions the dust which will come from the burned district in enveloping clouds will be not only distinctly disagreeable, but thoroughly laden with the germs of disease. With the lime and grit of old mortar which will thus be borne on the south wind over a large part of the business section of the town, to say nothing of the ordinary filth of the streets, the prevalence of throat and eye affections, if nothing worse, would appear to be a foregone conclusion. Within a month the windows of all the office buildings and business houses will be opened for the breezes of the spring; then the havoc will begin, not to end till fall. Already the merchants all about the burned district find that the dust is sifting into their places and over their goods. If the debris is to be carted out piecemeal all summer long, and all next summer, too, material injury and impairment of health must inevitably ensue. With the health of the people menaced, it comes clearly within the province of the mayor to declare the debris a nuisance and to order its removal at once. That justification for such action exists, many people believe. That such action will be taken an increasing number are beginning to hope. The meeting of April 19 will bring out the sentiments of business men more clearly than they have yet been expressed. If the results meet the expectations of the promoters, a movement will have been started for welding the influence of all business interests of Baltimore into concrete, forceful form in a way that will be not only extremely valuable at this time, but which contains possibilities of incalculable advantage for Baltimore's future.

THE APPEAL TAX COURT, TOO?

Latest Manifestation of the Microbe of Municipal Inanity.

It seems that no department of the municipal government is to escape the touch of the microbe of inanity which has manifested itself in various guises since the day when the city authorities faced the fire. It has led men in an emergency to shunt the liberty, the responsibility and the duty with which they were charged under the provisions of what has been represented to be a perfect city charter. Some have done those things that they ought not to have done; others have left undone the things that they ought to have done. Some have gone off at a tangent far beyond their legitimate province; others haven't gone off at all. It has been enough to appall everybody having at stake nothing but the welfare of the community, and that the city has not been paralyzed is due solely to the magnificent fiber of the masses of the people, who will not permit most discouraging facts to shake their conviction that the city can ultimately overcome an ill even worse than the fire.

The latest manifestation of the weird influence which has dominated the situation is in an interview of Hon. Conway W. Sams, Chief Judge of the Appeal Tax Court, if his utterance is to be taken as indicating the mind of the court.

One purpose of the interview was plainly an excellent one. It was a protest against gouging on the part of individuals, portions or all of whose property must be taken by the city for the determined street and dock improvements. Mr. Sams mentioned instances of property now held at a higher price than that at which it was last assessed, and, suggesting the possibility of following such valuation in assessing property for 1905 as tending to

reduce the tax rate to \$1.50—and ad hominem appeal—he said:

"The ground in the burnt district, according to the city's books, is worth \$13,867,298 (assessed value), but the owners think it is worth \$27,724,596 for ground alone. The city has thought that the improvements in the burnt district for taxation were worth \$12,908,300, but what the city has thought worth, both land and improvements, \$26,775,000 for purposes of taxation, the owners think worth double for purposes of sale. We will have to take the citizen at his own valuation for 1905."

Of course, the sarcastic interview in which these words appear, opening the prospect of much reduced taxation to those persons who take sarcasm seriously, and whose taxes have for several years been heavier than they should be because of incompetency in the city hall, may be expected to receive popular approval.

But it had also a serious purpose, which should be condemned. That purpose reflects the attitude of the taxing power of the city, which in recent years has embarrassed the majority of small taxpayers. Because men who ought to be large taxpayers are systematic tax-dodgers, in spite of their activity in public affairs whenever their interests are affected, the burden of taxation has been increased for the little householder and the smaller property-owner who cannot afford to employ a lawyer to guide him through the meshes of assessment, or who is too honest to take in any way but literally the improper framing of assessment blanks. These honest small taxpayers, the great majority of taxpayers, in fact, have been treated on the theory apparently that they are either knaves or idiots. The first alternative was suggested in the appointment to the Appeal Tax Court of an ex-detective by an administration which had rather a remarkable penchant for detectives, anyhow. The second was shown by another administration in the utterly indefensible trap which it set for honest ignorance in attempting to approximate through the assessment blanks the value of property as given for insurance purposes and its value as given for taxation. The two are, as everyone should know, radically different. The value for insurance is the amount with which furniture, for instance, could be replaced in case of destruction by fire. The value for taxation is the amount which the furniture would bring at a volunteer sale, not the amount it cost. A \$250 silver service should not, according to the law, be valued for taxation at that price, but at the price it would bring if resold to its maker, the price of the aggregate weight of silver in it. How many a lawyer in the city, if he includes at all his law library in his tax list, gives it a value not equal to the aggregate cost of any dozen books in the collection? These simple facts are cited to emphasize the impropriety which Mr. Sams has committed, if he is speaking as a Judge, in intimating that exorbitant values placed upon property needed for city improvement may be made the basis for assessment in 1905 on the portion of the property remaining after the improvements. That is rather an extrajudicial intrusion into the domain of the branch of the city government which will have the fixing of disputed values of property through the usual condemnation proceedings. It overshoots the mark by suggesting the threat of gouging taxation against gouging valuation. Neither is proper. It would nullify the provisions of section 178, chapter 120, of the laws of Maryland of 1896, which the Appeal Tax Court is supposed to execute, that—

"It shall be the duty of the said assessors, upon the return to them of the said schedules of property, to carefully examine the same and the various items thereof as listed by the owners of said property, and

said assessors shall determine and settle the value of each item of property returned in said schedule after examination of said schedule, and also an examination under oath of the party making the return of any other person; and said assessors shall personally inspect all real estate in their respective districts. In determining and settling such valuation, the assessors shall value each item of the same at its full cash value, without looking to a forced sale."

The sale of land to make city improvements possible may be just as forced as the sale of one's furniture to meet a debt. The provision quoted applies to the one as well as to the other. In the latter case the result must be a forcing down of the price; in the former a forcing up. Neither is to be considered in fixing the value for taxation.

Condemnation proceedings, with the people of Baltimore in their present frame of mind, ought to suffice to suppress the deliberate gouger. The man who honestly feels and knows that the purchase of part of his property by the city means a possible diminution of his income from that property has the right to take that fact into consideration in fixing his price, and should be undeterred by any threat as to future assessment.

Men of vast estate can afford to give property to the city, especially if that giving will insure the purchase by the city of other property which otherwise might be a loss to them. But the man or the woman whose whole estate is represented in one lot is not in the same position, by any means.

The situation as to property values in the burnt district should be approached with the scales of common sense and justice, and not with a club. The suggestion of Mr. Sams contains the promise of a rich harvest for attorneys-at-litigation.

IMPROVEMENT OF DOCKS.

The Problem Discussed by Major N. H. Hutton.

If a system of warehouses is to be provided for Baltimore in the comprehensive manner suggested by the Manufacturers' Record of March 31, it seems that the improvement will have to be the result of private enterprise. According to present indications, the burnt district commission will not entertain any idea that goes beyond the construction by the city of modern piers to replace those burned between South street and Jones' falls. By the plan now favored, the city will simply build the piers along modern lines, widen all the docks, dredge out the basin to a depth of 20 feet now and 26 or 27 feet later on, and lease out space on the docks, to be improved in accordance with individual fancies or requirements, within lines to be prescribed by ordinance.

While the authorities are waiting, before taking definite action, for the ratification by the people of the \$6,000,000 loan, which will be a condition precedent to any proceeding with the improvement, it is so generally assumed that the proposition will carry that preliminary plans are being worked on. Major N. H. Hutton, harbor engineer, who has been retained by the burnt district commission as consulting engineer in charge of the work of rebuilding the piers, has worked out plans for the treatment of the situation, and his recommendations have met with the approval of the commission. By these plans the city, when it gets possession of the dock property in question, will re-establish lines somewhat identical with the old ones, and will build the piers to a height of about seven feet above low-water line, which will be one foot above the highest tide ever known here. Then the piers will be leased on long-time leases to individuals, who may build warehouses in

accordance with their needs, or make such improvements, subject to restrictions in force, as may be desired.

Major Hutton, whose lifetime has been devoted to a study of harbor questions and shipping needs here, proposes a system of thoroughly modern wharves adapted to the needs of the coast trade. The deep-water vessels are not expected to desire or get accommodations here. But the piers and docks will be adapted to the changed conditions of today, instead of being fitted, as were those destroyed by the fire, to the commerce of the port when nothing but sailing vessels plowed the seas.

"That a tremendous change has occurred in conditions and methods," said Major Hutton to me, "the decline in rentals of the old warehouse property eloquently showed. Houses that formerly rented for \$5000 a year have for a long time been bringing little more than taxes, and families who used to have independent incomes have been forced to take salaried positions to make a living. I do not believe, however, that the city could advantageously go into the business of constructing warehouses. The people of Baltimore want things to suit their own ideas, and if the city were to erect warehouses, they might not meet the views and desires of prospective tenants. My recommendations, and so far there have been no objections made to them, are that the city provide the piers and lease space to tenants, who may make improvements to suit the needs of their business.

"There has been a great change in the system of warehousing, anyhow. Before the days of cables and telegrams a merchant would unload his cargo of 300 tons or so, taking three or four days for the work; would wheel it to his warehouse, hoist it up by rope and pulley; write to jobbers in Chicago, St. Louis or Cincinnati, and maybe in a couple of weeks would be ready to ship it out. Now a Merchants & Miners' boat will get in in the morning with 5000 or 6000 tons, and will be unloaded and reloaded with an outgoing cargo by night. The telegraph and the cable permit of immediate transactions, and generally a cargo has been sold to a Western jobber before the boat has landed. There is not the necessity, therefore, for general and extensive warehouses that once existed here. Conditions are different here, also, from what they are in St. Louis, where the Cupples warehouse system has been so successful. There it is necessary to carry large stocks of goods so as to promptly fill orders for customers, some of them as far away as Denver. I don't consider conditions here adapted to general warehousing in the same degree that they are in St. Louis, for instance; at any rate, it has been decided impractical for the city to go into the warehouse business. That will be left to individual enterprise.

"The financial part of the improvement, the question of rentals, etc., does not come within the scope of my duties, nor of the commission's, but naturally this important feature has been discussed by all of us. The cost of the work and the possible income are questions of great interest to the public. It seems altogether feasible for the city to provide the wharves as described, possibly keeping them in repairs, and let them on long-time leases on terms which will be advantageous to lessees and which will yet furnish an income sufficient for interest charges and for a sinking fund that will in time retire the bonds and give the city the property clear. In this event, and it seems altogether likely that it may be worked out this way, the very important improvement will have been no burden to the taxpayers and will in time become a very valuable income-bearing asset."

WATER IN FIRE PROTECTION.

Some Costly Lessons Taught by the Baltimore Fire.

There has been since the great fire of February 7 so much discussion of terracotta, reinforced concrete, limetell, granite, marble, steel and other substances as resistants of fire and as factors in the prevention of the spread of conflagrations, that sight has almost been lost of the value of water in that connection.

Why this is so it is difficult to understand. For there were certain phases of the fire proving the value of water applied in sufficient quantities and in the right place, and giving important hints for the future. When the wave of heat swept across Baltimore street at Liberty the woodwork of the windows on the top floor of Mullin's Hotel caught fire. A couple of streams were turned in that direction, but failed to reach the windows, hardly 70 feet from the ground, and so the building burned and sent its brands flying through the neighborhood. A little distance up a nearby highway were certain establishments filled with inflammable matter. There was nothing for the proprietors of these establishments to do than to prevent them and their contents from catching fire, so individual hoses were turned loose, everything was well soaked down, and the fire was stayed at that point. A little farther on the flames touched O'Neill's store, at the corner of Charles and Lexington streets. Upon that establishment had been installed a sprinkler system. This was put in operation, and a curtain of water was let down over all the windows threatened by the fire. There, too, its course was stayed. Across the street, at the southeast corner of Charles and Lexington streets, the fire actually got into one of the rooms of the Central Savings Bank. Three or four employees of the bank fought the flames with buckets of water and other primitive means, and saved the building. Further down Lexington street, at the corner of North street, is a seven-story building, still there, in spite of the fact that for nearly 12 hours a fierce wave of heat, brands and sparks swept across its roof of pitch and pebbles. During those hours 12 men poured buckets of water upon the roof, and it did not catch fire. In one of the skyscrapers a water pipe burst in an upper story and thoroughly soaked the wood flooring on the first story. That was the only wood in the building not burned. At the corner of Lombard and Gay streets flames attacked the United States storehouse. Its employees took possession of a visiting fire engine and used it and its hose so effectively that the fire was extinguished with comparatively slight loss among the valuable stores.

It is a question whether, in the absence of the skyscrapers, the fire would have reached its vast proportions. Certain it is that they, catching fire not from flames or sparks, but from the intense heat after the crest of the heat wave had been raised in the ignition of one of them through the shattering of its protecting windows by the use of dynamite to destroy a nearby burning building, were potent in distributing brands over a great area. At the same time it is evident to those who witnessed the progress of the conflagration that these skyscrapers carrying the heat to a great height and permitting a cushion of swiftly moving cool air to come in against the ground had something to do with the comparative immunity of such buildings as the Brown banking house, the Mercantile Trust Co. and the Safe Deposit & Trust Co. and the International Trust Co. The operation of this process is recorded in the condition of an eight-story bank building in the heart of the financial neighborhood. Five of the upper stories were completely swept by fire, nothing remaining

but the roof, the walls and the fire-resisting interior frame. From the third story down the damage became slighter and slighter, until in the banking-room proper, on the ground floor, the loss was limited to the smashing of the windows. Heat from a building in the rear of this bank damaged its eastern wall from the ground to the roof, and likewise all of the rooms within that wall. But so rapid was the movement of the heat and so intense the draught it created that the flames did not enter the banking-room.

This question has hardly been given the attention it deserves by the experts, most of whom lack the very important knowledge obtainable only through witnessing the fire. But there is no question that the instances which have been cited of the effects of the use of water may be taken as a basis for a formulation of certain general rules to be safely followed in the rebuilding in Baltimore.

The first is, that all the reservoirs of the city should be kept filled to their maximum capacity, provision being made, if necessary, for an emergency reservoir to be used whenever such a supply as that in Druid lake is reduced to the exceedingly low level at which it stood for some time during the latter part of the winter. There should be, in addition, powerful fire-fighting equipment in the heart of the burnt district. In all the area swept by the flames there was not an engine-house. Some of the money to be used by the city in restoring that district might be employed profitably in the installation of some such system as that already successfully tested in Philadelphia—drawing the water from the river and maintaining a supply at a constant high pressure, a system which New York has been quick to adapt for its congested business district.

Such a system will permit of a wholesale wetting down of a broad area ahead of the wave of heat upon the principle noted in the case of two or three buildings in the recent fire. After a fire has assumed the character given it by the explosion of the Hurst building, the use of dynamite, unless upon a most wholesale scale and promptly, and not in burning buildings, but ahead of the fire, will have the effect only of feeding the flames, and pouring water upon a burning building at such a time is just so much waste.

The installation by the city of an adequate water service available for any reasonable height in the restored district will facilitate the more general adoption of some such sprinkler system as that which as so efficient on the O'Neill building. Preparations for the use of that method have been made in the rebuilding of the establishment of Daniel Miller & Co. There will be an installation, automatic and thorough, which upon occasion will curtain the walls of the building in water, will keep the roof wet and will flood every floor. This should be duplicated in every new building raised from the ruins to the height of three stories, at least, and the

restored skyscrapers should have it not only for their own protection, but to prevent their becoming great chimneys of destruction for other property.

And the lesson learnt by Baltimore at such a cost should be taken to heart by other cities, to the end that Baltimore's experience may not be repeated elsewhere.

AS A HEALTH RESORT.

How the Burnt District Might Be Occupied This Summer.

What's the matter with converting the Burnt District into a great health resort during the coming summer. Folks who have voiced apprehension about the possibility of pestilence in the neglect to remove promptly the debris from the cellars so that the light and air might have free play there before the hot suns of June, July and August come, and about the freeing of sewer openings and the clearing of drains so that the waste waters may be carried away and not remain to stagnate and breed the germs of disease, have been assured by the Health Office that their fears are groundless. Of course, everybody knows that there is not the least danger in the odors which sweep over the city from the burnt district almost constantly, and that the dust blown from the debris by every favoring gale is really a tonic.

Therefore, with such favoring conditions, and in view of the fact that much of the debris is to remain where it is indefinitely, it is suggested that the best means of utilizing economically the waste area of about 100 acres would be to advertise it far and wide as a place where the weary and the weak of other parts of the country may come for rest and recuperation during the dog days. There is space enough to accommodate tents and light pavilions for certainly 50,000 persons, leaving enough space for all the schools of the Playground Association, to say nothing of the refuges supported by the Fresh Air Fund.

The invalids and pleasure-seekers will find plenty of occupation in watching here and there individual efforts to right things while the municipality is dealing with commissions, landscape architects and such like, and assessing property on a basis of sarcasm.

The children will have the most open kind of air without running the risk of catching cold from playing in the grass or upon any other damp spot, for the water from the sky will all run through the piles of bricks, steel, mortar, etc., into the ground beneath, and so on until it strikes bottom somewhere. They will hardly be able to play baseball, but they can play brick-bats.

And over all will float the delightful air from the basin, mingled with the sweet scents of the debris. It will hardly be a case of ozone or new-mown hay, but it will be extremely healthy. If you don't believe it, ask the Health Officer, who has barrels and barrels of disinfectants to meet any emergency.

THE MAN WHO "STEWARTIZED" ENGLAND

To Take Part in the Task of the Rebuilding of Baltimore.

The Manufacturers' Record of March 3 told something of the story of the wonderful work which has been done in this country and abroad by James C. Stewart, the engineer and contractor not only of national, but international fame. The fact that James Stewart & Co. are now established in Baltimore to take part in the rebuilding of this city makes interesting some additional facts other than those presented in the Manufacturers' Record's story of the influence which Mr. Stewart has exerted upon construction work in England, as well as in this country. Under the head of "The Man Who

'Stewartized' England—An American Who Does Things That Make the World of Work Gasp With Wonder," the New York Times lately published the following story of Mr. Arthur Warren:

"The story of an American's wonderful work abroad, and how all England, from King to carpenter, from the London Times to the Tinman's Chronicle—if such a sheet there be—got to talking of it, is worth the telling. The man is James C. Stewart of St. Louis and Pittsburg, constructing engineer, and the work—but the story should begin in this way:

"One of the great American manufac-

turing companies whose capital runs into many millions, and whose energies pervade the world, decided to form a British organization and to build works in Lancashire. Acres upon acres—160 of them—had been secured on the edge of Manchester. Works on the most extensive scale were to be erected thereon, according to the most up-to-date American plan, and they were to be equipped with the newest types of American machinery.

"The enterprise was to give employment to many thousands of British workmen. The plans for the buildings were made by one of the most expert men in this country, Thomas Rodd, chief engineer of the Pennsylvania Railroad lines west of Pittsburgh. The problem lay in the execution of this colossal scheme—colossal in dimensions and in difficulty. It was and is the only case on record of the construction of manufactories of such magnitude complete from foundations to machinery in motion. All other great works have started from moderate, even modest, beginnings. This was to start full-grown.

"It was the intention that British contractors should erect the buildings. And the bids came in. To say nothing of prices, the time element was of vast importance. With five years as the maximum and three years as the minimum, the bidding Britons said they could do it. Now, to wait five years, or even three, before your investment can begin to work for a dividend is a prospect unpleasing to the American manufacturer. And the payment of interest on the four or five million dollars locked up for three years or five during the construction of works is an item which bulks large in the books.

"So the hero of this story was summoned East from St. Louis for consultation. He signed a contract and sailed for England. In nine months he erected the buildings, saved the concern an immense sum of money and made a snug fortune for himself. Nine months and the work was finished, and Stewart sat in the big buildings waiting for somebody to come and officially receive them at his hands!

No Wonder They Talked.

"It would have been rapid work in America. But in Europe it had no parallel. No wonder they talked. There is no need of figures. They convey little to the lay mind. The Britons did not believe them when they were first quoted.

"One blithering, down-pouring Manchester morning Stewart took me over the works. They were just on the point of completion, and the active man beside me told in a few straight phrases how he had accomplished his task.

"But what in the name of wonder," said I, "have you done to the British workman? Have you performed miracles?"

"Thousands of tons of structural steel erected, millions of bricks laid, acres of glass put into place, tons of paint, seas of plaster, carpentering beyond the dreams of energy. One has to know how slowly such work is done in Britain in order to appreciate what Stewart did. Well, it was the difference between nine months and three years or five!

"Take an instance, now," I said. "The municipal bricklayers in London employed in the public works department of the county council lay 330 bricks a day, on the average. How many bricks did your men average?"

"Sixteen hundred, eighteen hundred, two thousand—in some cases twenty-five hundred. Sixteen hundred was the minimum, and that on face work."

"And were all your 4000 workmen British?"

"Yes. And only one, as far as I know, had ever been in America. He was a foreman. There were only eight or nine

Americans, besides myself. They were young men, my heads of department."

"Two or three weeks later I was in Manchester again, having in the meantime given to the London papers an account of Stewart's constructive energy. The municipal mason's 330 bricks a day furnished the text and Stewart's figures the context. Here was a theme to catch public attention. Everybody had been discussing in press and Parliament and on the public platform the reasons why Britain was not gaining ground in the industrial fields. Nearly everybody had said that the British workmen wouldn't work, and that the manufacturer and the capitalist had lost faith in him. Here was a denial merely, but proof positive to the contrary—a proof so great that it occupied acres. The public interest was aroused.

Waking Up England.

"It was at this time that I returned to Manchester. Stewart was at his morning mail. I handed him some newspaper clippings which criticised certain statements, and other clippings in which the writers had said, in effect: 'If these things are true, then England must wake up. It is possible, however, that the American gift for exaggeration has played its part here. The fact remains, though, that at Manchester the British workman has shown what he can do. The subject is of sufficient importance to justify a request that Mr. Stewart favor the public with further information.'

"Now, Stewart," said I, "here's your chance. Answer these good gentlemen."

"How? Where?" he laconically inquired.

"When you are in Rome do as the Britons do: Write a letter to the London Times."

"That's what — says," naming a friend in London. "But that sort of thing is out of my line."

"Nevertheless, write it, and cram it with facts."

"The letter went to the London Times by the afternoon mail. The Times printed it, and escorted it with a column editorial. The mightiest voice in England had spoken, and within a week Stewart found himself the most-talked-of man in the British industrial world.

"That was two years ago, and they are talking of him still.

"He is not a seeker of celebrity. His sudden fame did not keep him awake nights. He sailed into New York the other day and was happy in the fact that the interviewers knew him not. He was the same hearty, modest, unspoiled man of action he had ever been, ready to do any arduous engineering the world might call for, but unwilling to talk about it.

"When he went to England he introduced methods new to the English, the methods he had used at home. Everybody prophesied that he would have trouble with the British workman. But he had none of any importance. He is a leader of men.

Britons Learn Thing or Two.

"Everyone foretold that the British workman would hang on the neck of the job and hold it back. Nothing of the kind happened. Stewart's testimony is that the British workmen worked for him as well and as rapidly as if they had been Americans in America. You see, he gave them facilities they never had before; he organized and supervised their work better than it had ever been organized or supervised before, and he paid better wages than the men had been paid before. So much for organization and encouragement.

"I take it that what Stewart proved in England is that any lagging in British industry is not so much the fault of the

British workman as of the British employer.

"Now we know well enough that the 'American workman' we talk so much about is not all American. There are tens of thousands of British workmen in the United States—English, Scotch, Welsh. They are included in the praises that we sing, and in the other things we don't sing, about 'the American workman.' Stewart reasoned that in their own country the Britons could work as well as they did in America if American methods and American leadership were provided there. And he was right.

"In America there may have been persons who thought that Stewart's success, and the great clamor over it, would create antagonism on the part of British artisans, manufacturers and financiers. But the reverse was what occurred. Both camps of workmen, the union men and non-union men, were friendly. The manufacturers were pleased because, they reasoned:

"If these things can be done by the building trades, they can be done by all. The British workman, then, will enable us to compete with the oncoming German and the quick American."

"The financiers were elated because the manufacturers had found a new hope.

"Rush" and Organization.

"High pressure was not the only cause of Stewart's success. It was not merely the policy of 'rush' that won. Organization was the root of it. Stewart is the Kitcheener of the contracting world. He gets things done. He knew where every ton of material was coming from, and his men were on hand to hasten its manufacture and delivery.

"Captains of industry there are not accustomed to go about among their men with a 'good morning' or 'well done,' or 'that is not the way to do it. Do it this way!' They deal at second and third hand.

"At first, of course, there were misunderstandings. There were fellows who thought the 'Yankee Boss' had better be taught a thing or two. One morning a hulking chap dictated what was what and made a great figure before his mates. Stewart smiled that delicious, captivating smile of his that always breaks up argument. But the surly one broke into insult.

"Out shot Stewart's fist, and the rebellious chap sprawled on the ground, where he thought the stars rained on him. After that the word of the 'Yankee Boss' was never questioned. The one thing needful had been applied.

"Stewart is in his early forties, and has the strength of an ox, and a nerve like a steel girder. He has a strong, attractive face, smooth shaven; he has blue eyes, and a smile that makes you his friend for life. When he is in action, or his wrath is aroused, opposition has to make tracks.

"I have said that he was the most-talked-of man in the British industrial world. The ball was at his feet. He could kick it wherever he chose. But there were times in murky Manchester when homesickness would attack him like an army with banners.

"The first ship for America after his job is finished," he would say.

"But another big undertaking hove in sight, and the Britons prevailed upon him to remain awhile.

Salary \$100,000—No Joke.

"The Midland Railway Co. was erecting a huge and magnificent hotel in Manchester. It was to be the largest and best hotel in the kingdom outside of London. The railway company had been five years at it, and from all indications they might be five years more before they could open the hotel for business. The directors sent for Stewart. 'Undertake this work for

us,' said they. 'Of course the contracts are let and can't be broken, but you can become our building manager, with absolute control of the work. How many years will it take you?'

"This is May," answered Stewart. 'I'll have the roof on by Christmas!'

"And the plastering?"

"He named another early date.

"The railway directors were amazed, but they had faith. Stewart had proved what he could do. He said he could do what they wanted in a year for a liberal salary and a bonus of so much a month for every month to the good within that period.

"And the salary?" they asked.

"One hundred thousand dollars!"

"Of course he expressed it in pounds sterling—twenty thousand pounds.

"They smiled and said they were not joking.

"Nor am I," said he.

"They said they would think it over. They thought it over, and in a few days agreed upon figures. Up went the walls. And the roof was on before Christmas. Stewart finished within the year and earned his bonus. British workmen again! And again British talked.

"Everywhere his services were sought. He was asked to construct docks, canals, railways, public buildings. Sundry men offered to form Stewart Construction Companies. Other men fished for the chance to form them. But the energetic American wanted to come home. He stayed long enough, though, to undertake work on power-house construction and equipment in Scotland, and in Birkenhead, and in London. At this moment the most important hotel extension in London—the Savoy—is proceeding under his direction, although for two months past he has been vibrating between the offices of his firm, James Stewart & Co., in New York, Pittsburgh and St. Louis.

Knows the Game All the Way.

"Here, then, is a captain of industry after the American heart. He knows his work from foundation to turret-top. That is why, when Galveston was destroyed, they sent for him in hot haste, and before the waters had subsided he was clearing the way to rebuild the town. That is why his work is in demand all over the country.

"In his brother, A. M. Stewart, J. C. has a perfect partner, because the two men balance each other perfectly. While J. C. was abroad the burden of many great undertakings in America, from the Mississippi to New Jersey, was borne upon the shoulders of A. M., and borne with distinguished success. These two men are powers in the world of constructing engineering. And they have made their success by their own genius and persistent will.

"The British press based on Stewart's activities a new phase. They talked of 'Stewartizing' British industry. They seemed to think he had some magic of his own. Well, he had—in a way—the magic of his own personality. But to all inquirers he would say:

"I'm doing nothing new; I'm merely working in the usual American way."

"The 'usual American way' proved to be a good thing for Britain. It set up new standards in output per man per day, based on facilities and leadership.

"Of course everybody was curious to see this man. They expected to meet a raw-boned Yankee 'hustler,' who 'b'goshed' and spread-eagled and wore an air of 'tarnation smartness.' But they met a quiet man of delightful manner, who impressed them with tremendous reserve force. He became very popular. If he had accepted more than a minute fraction of the social invitations that came to him every day he would have had no time for work. But

his work went on as regularly as the clock. Every hour had to show a result.

"Today he would be in London, tonight he would start for Germany. The next day but one he would be on his way back, and the day after that on the Clyde, or in Lancashire, or Newcastle. Now and then he would slip across the Atlantic. In the evening you would see him at the Waldorf; the next morning he would telegraph you from Pittsburg, and you would have to reply to St. Louis in order to catch up with him.

"There are not so many men in the world who inspire confidence and keep it—not so many that we cannot afford to ignore them as they pass in the procession of life. But Stewart is one of them. You would pick him out easily as a man in whose nature there is no grain of meanness. He looks power, but not the power that overrides the rights of others.

"Send for Stewart," They Cry.

"Over there in England his methods were new because they combined quickness with thoroughness, with economy. He knew the value of time and organization. His work was well done, speedily done, and yet it was done at far less cost than any of the British concerns would undertake to do it. It became a matter of course when large undertakings were proposed that persons in authority should say, 'Send for Stewart.'

"Even the government cut red tape for once in its life and 'sent for Stewart.' Certain dock and construction work was required to carry out a favorite new project of the King in connection with the navy. The Lords of the Admiralty offered the work to Stewart because they felt that he was the only man who could assure its successful completion at the desired time. The work was carried through, and the King expressed his pleasure.

"Well, Stewart is one of the men who have made American achievement respected in the Old World. That is why he is worth writing about. He did it without bluster or parade.

"Now he is enlarging the big terminal at St. Louis. Where he will go next I cannot say, but a little while ago they were wanting him in Russia to build railways, and in New York for tunnels, and in South Africa for something else, I forget what. At one time there was some mighty proposition afoot regarding India. Sir John Aird had just completed the famous dam on the Nile. Some one asked Stewart if he would dam the Ganges.

"Yes," said he, 'damn the Ganges! I'm going home.'

"And he sailed for America.

"I have traveled with him through England, across the Atlantic and out to the Mississippi; I have known him in his home; at the head of his thousands of workmen; at his clubs, at his offices, at golf and at grinding work, and have found him always frank, free from humbug and pose and pettiness; he is a doer, not a talker; straight, generous and strong.

"What he did in England will be long remembered there. It was an object-lesson in industry, in industrial organization and management. When he went there he was unknown to the Britons. In less than a year his name was a household word. One-man-power is still potent in the world. And Stewart is a good example of it."

For a Material Exhibit.

Mr. Addison H. Clarke of William Wirt Clarke & Son writes to the Manufacturers' Record of the suggestion that an exhibition be made in this city at an early date of the best class of materials to be used in building in the burnt district. He says that the main assembly hall at the Builders' Exchange could be used for this exhibit, and he adds:

"Manufacturers of all classes of building materials could exhibit their products and explain their merits to those interested. Such an exhibit would bring to public attention the best materials, and would relieve the architects of much annoyance and loss of time in their offices by being compelled to talk to manufacturers' agents and examine samples of building materials."

A \$500,000 CONTRACT LET.

Seaboard Orders 500 Ventilated Box Cars from South Baltimore Car Works.

The Seaboard Air Line Railway has awarded to the South Baltimore Car Works at Curtis Bay, Md., a contract for 500 box cars of 60,000 pounds capacity each. The cars are to be ventilated and adapted to general freight business. The approximate value of the contract is \$500,000, and it was awarded after competitive bids had been received from different manufacturers.

The purchase of these cars will give the Seaboard a total of about 4500 box cars, in addition to its other large freight equipment, and will be a very substantial addition to its rolling stock for handling the increased and increasing business in the Southern States traversed by its system. When the new financial interests in the company obtained representation in the directorate several months ago it was announced that the policy of improvement would be maintained and advanced, and the awarding of this contract is one of the first steps in line with that statement.

To Attract German Settlers.

In the fall of 1903 leading men of Chattanooga organized the Chattanooga district bureau of immigration for the purpose of inducing foreign immigrants, especially Germans, to settle in that district. As a means of encouraging this movement the bureau has published for distribution at the great ports of the country and in Germany an attractive and comprehensive pamphlet prepared by C. Lieb, manager of the bureau, containing a mass of detailed information about the opportunities for farmers and others. The pamphlet, which is printed in German, deals with such matters as climate, soil, water, mineral products, markets and transportation facilities, and undertakes to answer clearly the natural questions which the settler would ask. Not only is the district as a whole described, but particulars are also given of such nearby points as Menlo, Trenton and Rising Fawn, Ga., and Bridgeport, Ala. The illustrations show typical homes and farm buildings, groups of cattle, vineyards, corn fields, potato fields, cabbage patches and peach orchards in the district. The pamphlet should do much to further the work of the bureau.

Southern Hardware Jobbers.

The Southern Hardware Jobbers' Association will hold its annual meeting at Atlanta, Ga., May 24, 25, 26 and 27. Mayor Evan P. Howell will welcome the association at the morning session of the first day, and President W. M. Crumley of Atlanta will deliver his annual address. The discussions during the convention will deal with plans for the advancement of the interests of the association, with the subject of rebates and restrictive prices from manufacturers of association goods versus open market, with the protection of jobbers against radical declines brought about by disagreements in their own associations, with the reduction of expense accounts, with the withholding of premiums from jobbers on account of the purchase of goods other than their manufacture, and with kindred topics. Among the entertainments for the visitors will be a smoker, a banquet and a trolley ride.

RAILROADS

[A complete record of all new railroad building in the South will be found in the Construction Department.]

JACKSON TO VICKSBURG.

Survey in Progress for an Electric Railway to Connect Them.

Mr. A. M. Nelson, cashier of the Jackson Bank and treasurer of the Mississippi Land & Investment Co., writes from Jackson, Miss., to the Manufacturers' Record about the proposed electric railroad to connect Jackson with Vicksburg. He says:

"Mr. W. R. Paige of Terre Haute, Ind., is the engineer in charge of the work we are doing now. He is locating the road, ascertaining the grades, levels, etc. He has a competent corps of engineers assisting him. The road will be 45 miles long, starting at Jackson. The cars will leave the Union Depot, where there are 28 passenger trains passing daily. Ten miles to the west the road will pass through Clinton, a college town, the Mississippi College and Hillman College being located there. The former is the property of the Baptist Church of the State, and has 325 students this year. Hillman is a college for young ladies, and is also under the control of the Baptist denomination, and has 125 students enrolled this session. Eight or ten miles further west the road will reach Bolton, an important place, and supported by a very rich agricultural country. Last season it handled 11,000 bales of cotton. The people there have recently put in a good water-works system, water being furnished by an artesian well; it is clear, cool, soft and agreeable drinking water. There are some very handsome residences.

"Edwards is the next town, 10 miles west, and between Bolton and Edwards the road will pass through the famous battleground of Bakers Creek and Champion Hill. This is a point of much historical importance, for it was from there that General Pemberton retreated to Vicksburg. We propose to establish a park there. Edwards is also a place of much business importance, and handles as much or more cotton than Bolton. Six miles west of Edwards the line will traverse the valley of the Big Black river. The lands of this river are as fertile as the lands of the famous Mississippi-Yazoo Delta. Bovina is the only town between Edwards and Vicksburg. On entering Vicksburg the cars will pass through the Military Park, another place important in history.

"We propose to handle package or light freight, and from the information we have on this subject, our freight business will be limited only by our capacity to handle it. The line will practically put Jackson and all intermediate points on a river basis for the class of freight it will handle. We have assurances from the merchants and people generally that they will heartily co-operate with us."

GULF & PACIFIC.

Plans of C. C. Waller and W. I. Young for a New Texas System.

The recently-chartered Gulf & Pacific Railway Co. has organized at Dallas, Texas, by electing the following officers: President, C. C. Waller of Dallas; vice-president, W. I. Young of Greensboro, N. C.; secretary, L. J. Thornhill; treasurer, C. A. Steele; general attorney, Israel Dreeben. The company proposes to build from Paris, Texas, to Velasco, on the Gulf coast of Texas, about 345 miles, with two branches, one 115 miles long to Dallas, Texas, and the other 40 miles long to Dayton, Texas.

President Waller is reported as saying that he believed the prospects were particularly bright for the construction of the road. W. I. Young, who was elected vice-

president, is the moving spirit in the projected cotton mills at Mabank and Paris. In the former place \$30,000 in cash and 50 acres of land had been donated by citizens as a bonus, while Paris citizens donated a \$75,000 cash bonus and land which cost the citizens' committee an additional \$5000. Already eight miles of line have been completed between Clinesburg and Coal Springs.

Mr. Waller is further quoted as follows: "We propose to push the work of construction as rapidly as possible. I believe that the construction of the Panama canal will cause the diversion of such a vast traffic to the Gulf ports that it will be impossible to handle it at the terminals now established, and it will be found that Velasco presents superior advantages for the handling of a considerable portion of this traffic. We have this fact in view in our plans. The establishment of cotton factories at various points along our line will furnish a goodly volume of freight, and the country we are traversing is showing a most wonderful development in the fruit and vegetable-growing industry, and the country is capable of supporting in comfort a very large population."

FRISCO TO NEW ORLEANS.

It Appears That the Company Will Build Its Own Line to Baton Rouge.

President L. S. Berg of the New Orleans Terminal Co. is reported from New Orleans as saying that the Frisco system, of which his company is a part, has decided to build its own line from Marion, Ark., to Baton Rouge, La., instead of using the Gould system's new line along the west bank of the Mississippi. This will make the distance from New Orleans to Memphis 416 miles, as the distance from Baton Rouge to Marion is 327 miles. From Baton Rouge to New Orleans the track of the Yazoo & Mississippi Valley will be used. The line is now being improved, it is said, to make ready for the deal with the Frisco.

It is further stated by Mr. Berg, according to the report, that about June 1 the Frisco will begin operating trains into New Orleans, going temporarily over the Mobile & Ohio and the New Orleans & Northeastern from Tupelo, Miss. He is further quoted as saying that progress on the terminal tracks to the site of the proposed passenger station at Canal and Basin streets is progressing rapidly, and a temporary station will be built pending the construction of the permanent depot, plans for which are to be submitted soon. It will take about a year to build the permanent station.

Anderson and Greenville Trolley.

Dr. George E. Coughlin writes from Anderson, S. C., to the Manufacturers' Record about the proposed electric railway to connect Anderson and Greenville. He says:

"The length of the proposed electric railway is 35 miles. It will serve Anderson, Belton, Williamston, Pelzer, Golden Grove, Piedmont, Gant and Greenville. It is to be built on private right of way in the towns, cities and counties. Maximum grade will be 2 per cent.; maximum curvature, 4 degrees; weight of rail, 70 pounds; bridges to sustain at least 100-ton electric locomotives, with train of modern freight-train loads.

"There are 36 large cotton mills along the line of road, with immense amount of freights to be handled, of which it is proposed to handle at least a share by reason of many of the largest millmen being stockholders in my road. S. H. Knight is chief engineer. He was formerly with the Applegard Syndicate of Ohio, and chief engineer of the Union Traction Co. of Indiana. The locating surveys have just been completed, and it is expected that it will be at

least two months before we will be ready to invite bids for material."

Dr. Coughlin is also reported to be interested with J. A. Brock, R. S. Ligon, George E. Prince and others in a plan to build an electric street railway in Anderson, for which the council has granted a franchise.

BIG TERMINAL PLAN.

Louisiana Railway to Build Elevators and Warehouses on the Mississippi.

A report from New Orleans says that the Louisiana Railway & Navigation Co., formerly the Shreveport & Red River Valley Railway, which is now building to New Orleans via Baton Rouge, will construct at the Willow Grove Landing, just above the Stuyvesant dock terminals of the Illinois Central Railroad, elevators, wharves, freight sheds and warehouses as extensive and commodious as those of other lines entering the city.

The company has at Willow Grove a frontage of 2000 feet on the Mississippi, and its land holdings extend 2100 feet back from the river. It is expected that construction will begin some time during the coming summer, but just at present the company is working to complete its terminals inside the city and the yards adjacent to them. The Willow Grove Landing has been used by coal companies for some time, but part of the property is occupied by market gardens.

William Edenborn, 71 Broadway, New York, is president of the company.

L. & N. IN CINCINNATI.

Extensive River-Front Deal—Reported Plan for Elevated Tracks.

The Louisville & Nashville Railroad Co. has, it is reported, acquired in Cincinnati, Ohio, by purchase, the entire block between Walnut and Main streets and from Water street to the river, which now gives the company for terminal purposes all the river front from Plum street to the Pennsylvania bridge, which structure it recently purchased, excepting a small strip reserved by the city for a wharf. By this deal the railroad company also acquires Gilmores Landing and Wiggins Landing.

It is further stated that the Louisville & Nashville proposes to build elevated tracks above the reach of high water to connect their terminals from Plum street to Main street. The bridge purchased connects Cincinnati with Newport, Ky.

FROM ELKINS TO TIDEWATER.

Another Proposition to Build a Coal Road Across Virginia.

Concerning the report that he is interested in a plan to build a railroad from Elkins, W. Va., to some point on the Atlantic seacoast under the name of the Central Railroad of Virginia, Hon. Henry G. Davis writes from Washington, D. C., to the Manufacturers' Record saying that although the project of building to tidewater has been considered, nothing definite has been decided.

The dominating interests in the Coal & Coke Railway, of which Mr. Davis is president, have for some time been looking for a route through Pendleton county, West Virginia, and a number of surveys have been made there.

Camden to Fordyce.

Mr. H. C. Homeyer, president of the Interurban Transit Co., writes from Bearden, Ark., to the Manufacturers' Record that the purpose of the company is to build, equip and operate an electric railway from Camden to Fordyce, Ark., via Van Duzer, Onaska, Eagle Mills, Millville, Bearden, Best, Harlow, Little Bay and Thornton. Branch lines may be built as required. Both freight and passengers

will be carried. Electricity will also be supplied to customers for lighting, power, heating, etc. The authorized capital is \$350,000, in shares of \$25 each, and in addition to Mr. Homeyer, who is both president and chairman of the board, the officers are C. C. Gunnels, vice-president; Charles P. Brice, treasurer; J. G. McDonald, secretary. The line will be about 30 miles long, with proposed extensions of 40 miles.

Greenville & Knoxville.

The Greenville & Knoxville Railroad Co. has been chartered at Greenville, S. C., by Hugh H. Prince of Greenville and William H. and D. C. Paterson of Atlanta, Ga. This is a plan to build a railroad on the old roadbed of the abandoned Carolina, Knoxville & Western Railway, and to extend it to the North Carolina boundary, so as to make a line about 34 miles long. About 20 miles are already graded. The proposed route is via Travelers' Rest, Marietta, Cleveland's Mill and Riverview.

About a year ago the proposition to build on this old roadbed was considered by the Saluda River Lumber Co., and later it was proposed to build from Greenville to Greenwood, about 50 miles, following the proposed route of the old Carolina, Knoxville & Western. Whether this will be also taken up by the new incorporators is not yet disclosed.

For an Independent Entrance.

From Kansas City it is reported that the Rock Island system has contracted to use the Kansas City Belt Railway for its passenger and freight trains. It is further stated that the Rock Island's line to St. Louis will be completed into Kansas City about the middle of May, and that then the use of the Belt will begin, while trains from Chicago will use it as soon as a cut-off between Trenton, Mo., and Kansas City is completed.

According to another report, the Rock Island and the Santa Fe systems will unite in building a terminal depot for their own use on the Belt Line west of Grand avenue at Twenty-ninth street.

Mobile, Jackson & Kansas City.

Mr. F. E. Dewey, vice-president and general manager of the Mobile, Jackson & Kansas City Railroad, is reported as saying that construction is progressing rapidly. Continuing, he says: "We have 130 miles of long-leaf pine at the south and 110 miles of hardwood timber at the north, which will afford tonnage for the next 30 years. Middleton, Tenn., is 275 miles from Mobile, and the narrow gauge from Pontotoc to Middleton is to be made standard, 62 miles having already been changed." At present 144 miles of line are reported in operation, and 52 more miles are to be ready for service by April 20.

Mississippi Central.

The Pearl & Leaf River Railroad now appears under its new title of the Mississippi Central Railroad, and the line has been completed from White Sand to Silver Creek. The total length of the line is 55 miles. The officers are the same as before. It is possible that the company will build an extension this year from Hattiesburg to Scranton, Miss., about 80 miles. Rumors have been in circulation that the Queen & Crescent Route might endeavor to acquire control of the Mississippi Central and build the projected line to Scranton, where it is said a fine harbor could be obtained.

Kansas City to Houston.

A dispatch from Houston, Texas, says that the Burlington system is securing rights of way to build a line from Kansas City to Houston. It appears possible that this report refers to the projected Kansas

City, Oklahoma & Houston Railroad, which is being promoted by P. W. Bean of Kansas City, who has, it is said, been endeavoring to secure rights of way and bonuses in Texas, the line being planned to connect Palestine, Athens, Canton, Grand Saline and others point in that State.

Clay to Camden-on-Gauley.

The Buffalo Creek & Gauley Railroad Co. of Harrisburg, Pa., has been incorporated to build a line about 35 miles long in West Virginia from Clay Court House to Camden-on-Gauley; capital \$100,000. The incorporators are John Y. Boyd, Jas. M. Cameron, Henry McCormick, Jr., and Vance G. McCormick of Harrisburg, Pa., and Bud Thompson of Martha Furnace, Pennsylvania.

Service to Be Resumed.

The Chesapeake Steamship Co. announces that on Monday, April 18, the daily service of the York River Line between Baltimore and West Point and Richmond, Va., will be resumed. Mr. Reuben Foster is general manager, and E. J. Chism is general freight and passenger agent.

Railroad Notes.

The sale of the Gurley & Paint Rock Valley Railway is reported from Scottsboro, Ala., the property being bought in by Col. M. A. Clay of Princeton, Ala., for \$18,000.

The Gulf & Ship Island Railroad Co. reports through Fisk & Robinson of New York for the month of February as follows: 1904, gross \$145,964, expenses and taxes \$104,168, net \$41,796; 1903, gross \$122,650, expenses and taxes \$91,008, net \$31,642. For eight months 1904, gross \$1,237,868, expenses and taxes \$793,945, net \$443,923; for 1903, gross \$1,119,200, expenses and taxes \$719,112, net \$400,088. The gross earnings for March, 1904, were \$149,623; for the same month of 1903 they were \$144,164.

The Canal and Sail Vessels.

An interesting contribution to the discussion of the practical bearing upon American commerce of the construction of the interoceanic canal is made by Mr. James Page of the United States hydrographic office, through the National Geographic Magazine of Washington. He deals especially with the sailing ship and the Panama canal, and makes the point, grounded upon figures relating to the tonnage and number of sailing vessels compared with those for steam craft, that the Pacific is likely to remain for many years the cruising ground of the modern sailing ship, which has still a great part to play in the expansion of commerce. He considers the winds at the Atlantic end of the canal, suggesting that there the difficulties for a sailing vessel will arise from a superabundance of wind rather than a lack of it, but that at the western extremity these conditions will be reversed, as there a vessel will enter an extensive belt of calms and light airs, rendering sail navigation more tedious than in any other frequented portion of the sea. He traces the possible changes in sailing routes with the completion of the canal, and though he finds disappointment to some extent in the data relating to the substitution of the canal for the present route around The Horn, he gives a hint that, perhaps, by throwing the canal open to sailing vessels of small tonnage the coastwise trade between the Atlantic and Pacific seaboard, once so profitable, may be revived. The whole article, showing a comprehensive grasp of details, is suggestive, and will appeal strongly to mariners and those who mariners serve.

PHOSPHATES

Potash in France.

Robert P. Skinner, United States consul-general at Marseilles, France, reports that while American potash was formerly received in Marseilles, it has now been displaced by that of French or Italian manufacture. The potash used in that market is called "Potasse facon d'Amerique," and its usual price f. o. b. Marseilles is 30 francs (\$5.80) per 100 kilograms (220.46 pounds). At present it is being purchased for 27 francs (\$5.21). The first-named buyer purchases this material in lots of 5000 kilograms (1102.3 pounds) every four months. The introduction of American potash depends entirely upon the price at which it can be offered. Potash and carbonate of potash are upon the French free list. The Marseilles dealers supply themselves usually in Paris.

Fertilizers at Nashville.

It is estimated that the output of fertilizer at Nashville and West Nashville this season was 150,000 tons, an increase of about 40,000 tons over last season. Between 35 and 40 per cent. of this increase is credited to West Nashville.

Phosphate and Fertilizer Notes.

An extensive deposit of nitrate of soda, pronounced by the State geological survey as being high in nitrates, has been discovered in Presidio county, Texas, on the route of the Kansas City, Mexico & Orient Railroad. The deposit extends into Mexico, and covers a large tract of land in the State of Chihuahua.

It is announced that the Planters' Chemical Co. will erect at Talladega, Ala., a \$100,000 plant for the manufacture of fertilizer. The capacity of the plant will be about 20,000 tons of acid phosphate and ammoniated guano a year, the stockholders of the company being also owners of cotton-oil mills which will supply the cottonseed meal to be used in the manufacture of the guano. The plans contemplate one building 150x260 feet, one 82x216 feet, and one 40x60 feet, beside a detached boiler and engine house 30x40 feet.

The Washita Trust Co. of Ardmore, I. T., capital \$50,000, has organized with the following officers: J. B. Spragins, president; J. M. Jameson, vice-president; S. R. Bruce, secretary; J. A. Bivens, treasurer. The incorporators are J. B. Spragins, J. A. Bivens, J. M. Jameson, S. R. Bruce, Frank Butt, Thos. H. Norman and James Mathers.

A dispatch from Kingston, Island of St. Vincent, states that W. B. Seabrook, an expert ginner from South Carolina, has opened at Kingston a plant ginning 3600 pounds of cotton daily, and that the cotton industry there is developing rapidly.

Angel S. Fidalgo of Barcelona, Spain, writes to the Manufacturers' Record that he is a wholesale dealer in postal cards, and would like to obtain the agency for an American house publishing postal cards.

The sales in the Joplin (Mo.) district during the week ended April 9 were 10,346,140 pounds of zinc ore and 1,234,560 pounds of lead ore of aggregate value of \$215,795.

A committee of the Wilmington (N. C.) Chamber of Commerce is endeavoring to secure the establishment of a fish hatchery near that city.

The next convention of the Interstate Cottonseed Crushers' Association will be held on June 6 at St. Louis.

During March 16,485 tons of cottonseed meal and 168 tons of cottonseed cake were exported from Galveston.

MECHANICAL

Vickers Self-Loading Hand Truck and Wagon.

The Vickers Self-Loading Hand Truck and Wagon marks a positive advance over contrivances for loading and unloading

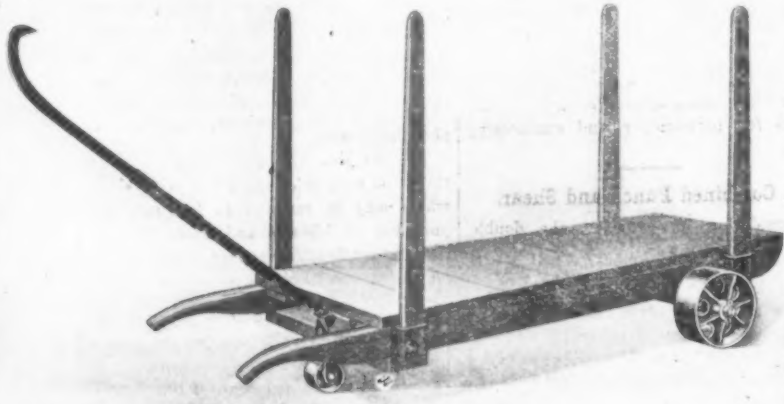
truck, but it is upon the scientific principle of its construction that its fame rests—the power of the clutch (which can be adjusted to suit any size box or barrel in a minute's time) to hold the article and transfer it to truck with minimum labor on the part of the operator. The truck contains no iron shoe, necessitating the uplifting

It is made in different styles and all sizes, with object to handle all descriptions of merchandise without injury. The accompanying illustrations show the Vickers truck. The Standard Truck Co., 163 N.

Factory Chimneys in the South.

By H. CLAY MOORE of Atlanta.

An enterprise which is now attracting considerable attention in the manufactur-



VICKERS HAND TRUCK AND WAGON WITH ADJUSTABLE SELF-LOADING DEVICE.

vessels, general store and factory purposes, including all the requirements of the common truck, which has been a feature of utility in the warehouse and factory, depots and wharves for many years. The Vickers patent truck contains a mechanical feature, known as a plain or extension device, by which the heaviest boxes,

of heavy box and then heavy straining on the part of who handles the truck and his assistants, if the common form of truck is used, but, on the contrary, the extension device brings the heavy box forward without the least apparent labor, where its weight rests upon the axles. The truck is devised upon the principle of fulcrum or



THE NEW WAY—WITH VICKERS TRUCK.



THE OLD WAY.

barrels, bales, hogsheds and general miscellaneous freight can be handled with less effort than would require the aid of four or five strong and vigorous men with the old style of truck. The truck itself, of course, shows improvement in its general make, its lightness and yet solidity of the parts, thus lengthening the life of the

leverage power, and all that is comprised in mechanism of this nature is obviously part of the construction of this article, which is in such general use in all the countries of the globe. It is a truck which can be made into wagon form simply by lowering the handles, thus facilitating the transfer of heavy load from place to place.

Second street, Philadelphia, Pa., manufactures the Vickers.

A Loose-Pulley Oiler

An accompanying illustration shows a patent loose-pulley oiler which should appeal to every user of pulleys, wheels or rollers. This device has been in practical use for 15 years, and during that time has been thoroughly tried and tested by many of the most expert mechanics and extensive users of machinery throughout the country. It has been applied to almost every size and speed of pulley and variety of machine, from the small loose pulley of the watchmaker's lathe to the large gear of the most ponderous machine. This oiler



VANDUZEN'S PATENT LOOSE-PULLEY OILER.

lubricates the shaft when the pulley begins to run, also when it begins to stop, and does not feed oil while the pulley is running at full speed. It keeps loose pulleys oiled at all times for two to four weeks with one filling of the oiler, and does not throw the oil or waste it. It is made entirely of brass, is strong, durable and almost indestructible.

This device is the Vanduzen Loose Pulley Oiler, and it is manufactured by the E. W. Vanduzen Company, 428 to 434 E. Second street, Cincinnati, Ohio. The company guarantees its oiler to give satisfaction.

It is reported that a rich zinc deposit has been discovered on the farm of Judge N. A. Patterson, four miles from Jonesboro, Tenn., and that the development of the vein will begin at once.

ing districts of the South is the building of large factory chimneys out of perforated radial brick. The writer has had occasion to closely study this matter for a number of years and investigate the practical workings of the construction in the Old Country. There can be no doubt that the building of large chimneys of perforated radial brick is deservedly "a winner," and has come to stay.

Fig. 1 represents these brick in their different sizes and shapes. They are made with square vertical perforations running entirely through the brick, which serve three very important purposes, as can be readily understood in noting Fig. 2. First, they serve as a dead-air space, which is the best possible non-conductor of heat; this, of course, tends to make a superior draft. Secondly, the mortar forming the horizontal joints between the brick necessarily enters into these perforations both above and below, with the natural result that when set the mortar locks together these different brick and makes a bond which cannot possibly be equaled with the common form of brick. Third, the perforations allow the brick to be more thoroughly burned, so that their strength and density exceed that of the ordinary brick, and with reduced weight.

It is very clear from Fig. 2 that the plan of using brick radially molded is very far superior to the idea of using the common brick of regular oblong shape, for the reason that the latter must be cut and trimmed to form a circle; also calling for the use of excess mortar to fill up the uneven holes or joints. (The square chimney has so many decided disadvantages compared to the round form that it is seldom seen in modern construction.)

These radial brick, as made by the Custodis people at their several factories throughout the United States, are manufactured from a consistent clay especially analyzed and selected for its purity and freedom from ingredients which are liable

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FIG. 3—F.

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to unite with either the atmosphere on the outside or the boiler gases on the inside and cause corrosion. These chimneys are stepped off on the inside and battered on outside, as shown by sectional cut Fig. 3. By using this plan of taper the inside of these chimneys is larger in area at the

chimney construction and put their expert constructors on their work, and as they have had over 33 years' experience in various parts of the world and have built thousands of these chimneys, it goes without the saying that they are in a most excellent position to furnish the highest

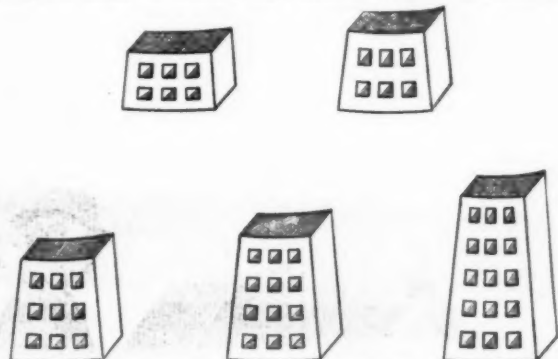


FIG. 1—FACTORY CHIMNEYS IN THE SOUTH—CUSTODIS BRICKS.

bottom of the column, where the gases are hotter and require more room. With this method of construction one of these chimneys can be built complete without ever cutting a single brick, and at the same time, on account of the very exceptional

possible type of chimney construction and engineering.

I have noticed that in Germany, Switzerland, France, Belgium and other European countries this type of chimney is now almost universal, and the manufacturers

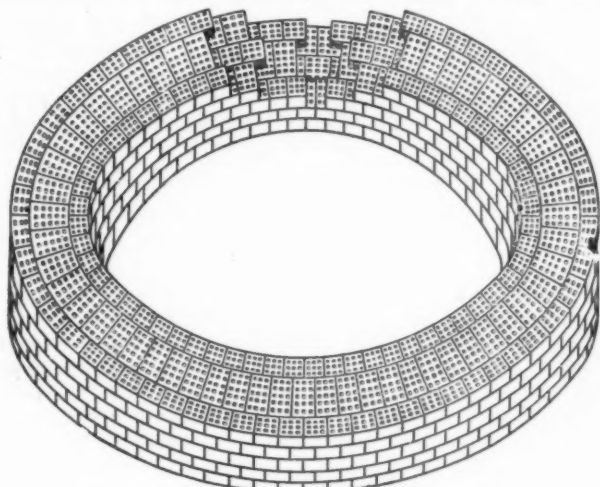


FIG. 2—FACTORY CHIMNEYS IN THE SOUTH.

bond securing them, they will stand a wind pressure of over 50 pounds to the square foot, which is the equivalent of a gale of 100 miles an hour. On account of this method of construction also, the weight of the chimney is about one-third less than

in the Old Country certainly have the reputation of "building for keeps." There is a decidedly noticeable movement in the South to avoid the old idea of "building for a day" and putting up constructions which will readily and easily disintegrate.

The life of one of these perforated radial brick chimneys has never been determined. A great many of them have been put up in the Old Country over 30 years, and look today good for 30 more. As they can be put up in the South at practically the same cost as a common brick chimney, it readily accounts for the popularity of this construction and for the large number of these chimneys now being erected. One is now being erected at the Fulton Cotton Mills, Atlanta, 225 feet high. Several have recently been erected 300 feet high. Some of these chimneys are taking the place of common brick chimneys, as there are numberless instances of where common brick chimneys are put up by those who are not skilled in the special workmanship of this kind and in the selection of a particular clay adapted to withstand the ravages of weather and corrosion from chimney gases, and thus go to pieces in a few years.

Another good feature of this type of chimney is that it will admit of a very pleasing and artistic treatment by the use of contrasting colors in brick for decorative designs. Several of these chimneys throughout the country have included a neatly-arranged lettering of the name of the plant, thus giving a very excellent sign or advertisement. Such a chimney is now

being erected for Smith & Co.'s flour mill, Knoxville.

The tallest chimney of any description in the United States is at Constable Hook, N. J., and is built of this Custodis radial brick construction. It is 365 feet high. These people are now manufacturing these brick for their Southern trade at Sylacauga, Ala., and shipping them to all parts of the South.

It is a tribute to the business foresight and judgment of the manufacturers of the South to see that they are naturally turning from temporary chimney construction, which has so largely obtained in the past decades, to the foregoing described methods of chimney construction, with its strong points for permanency and engineering value.

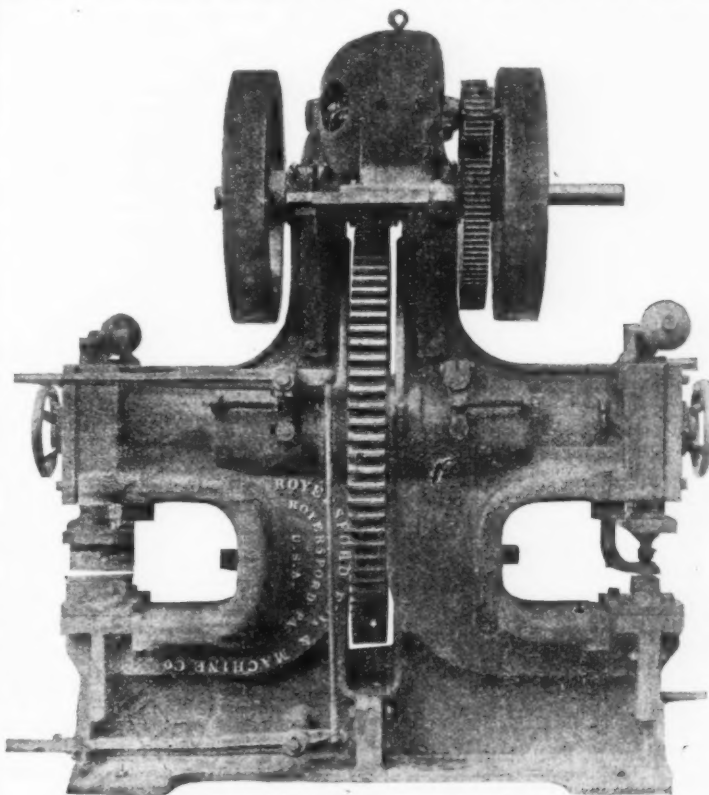
A Combined Punch and Shear.

Considering its capacity, the double punch and shear shown by the accompanying illustration is of a remarkably compact design, and in its method of driving it is also particularly creditable. Although it is now usual, when driving this style of machine tool by motor, to mount the latter

the punch or shear through the plate at the interval of the stroke, thereby relieving the motor of the damaging shock and liability to spark that accompany a suddenly-applied overload.

The main gear near the center has accurately cast steel teeth, and runs smoothly. Clutches having both hand and foot control may be operated to connect or disconnect it to either of the eccentric shafts that raise and lower the tool heads; therefore either side of the machine may be caused to act independently of the other, or both may be worked together. The eccentric shafts are made of steel, and are of large diameter to afford ample wearing surfaces, and the eccentric boxes are of phosphor-bronze.

The machine has an 18-inch depth of throat on both sides and lower jaw pieces, which may be removed to facilitate the punching of I-beams and channels. On the shear side the machine is capable of cutting a length of six inches through a three-quarter-inch plate, or a one-and-one-quarter-inch round bar, and on the punch side it is capable of punching one-inch holes through three-quarters-inch iron.



PUNCH AND SHEAR WITH MOTOR.

well up on the frame more or less out of the way, it is seldom that so unobtrusive a location is selected as the one shown here. Moreover, it has the advantage, not common to all, of applying the drive between the flywheels, and of accomplishing it without greatly increasing the distance between them. The short length of the shaft and the fact that it is of rather large diameter combine to remove all tendency to spring under the torsional strain to which it is subjected at the instant of cutting.

The motor is a five-horse-power semi-enclosed type Crocker-Wheeler machine, built by the Crocker-Wheeler Co. of Ampere, N. J., and is supported upon a small cast-iron bracket, which is bolted to the bearing pedestals of the flywheel shaft. The bracket and the train of gears between the motor and the intermediate shaft were the only special parts required. Fortunately, the proper speed of the flywheel shaft was obtainable with but one gear reduction, and as the pinion on the motor is of rawhide, it is practically noiseless. The flywheels have been proportioned so that their inertia capacity is sufficient to drive

The Royersford Foundry & Machine Co. of Royersford, Pa., is the builder of this combined shearing and punching machine, also of a full line of combined and single-end machines in various sizes and for almost all purposes.

West Nashville Building.

Building is active in West Nashville, Tenn. Twenty-one houses are under construction, and there is only one residence for rent in the town, and that will not be completed until May 1. Since January 1, 1904, two lumber yards and a trunk factory have been started, and should the Tennessee Central remove its South Nashville shops there, it is expected that many factories will be located along its belt line.

To Represent Engines.

D. A. Reid of Macon, Ga., has been handling mill supplies for several years, and, desiring to change his business, asks manufacturers to address him relative to the agency for engines or some other specialty. Mr. Reid states that he is a practical mechanic and well known to the trades in Georgia, Florida and Alabama.

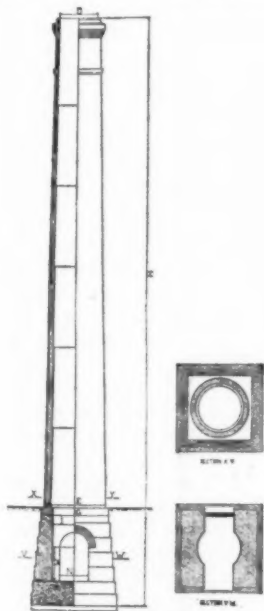


FIG. 3—FACTORY CHIMNEYS IN THE SOUTH.

would be required in building the same chimney out of common brick. There are also one-third less joints.

As these people make a specialty of

TEXTILES

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the Manufacturers' Record. We shall be glad to have such matter at all times, and also to have any general discussion relating to cotton matters.

PRICE OF COTTON GOODS.

Its Relation to the Cost of the Raw Material.

Mr. Charles Scott of Rosedale, Miss., in a letter to the Manufacturers' Record, says:

"On the present basis of prices of manufactured goods, what are spinners justified in paying for cotton, leaving a margin for a reasonable profit?"

"I think an article on this subject in your valuable magazine would prove of interest to a great many of your readers. If you do not think so, I would be glad if you would reply to the inquiry through the mail for my personal benefit."

A leading cotton manufacturer, identified with all phases of the cotton business, submits the following reply to Mr. Scott's question:

"It would be difficult to give a general answer as to the prices of cotton on a basis of which the manufacturers could run at a profit with goods at current market prices. There may be a few goods now being made at prices that are profitable to the manufacturer. Sometimes there is a temporary scarcity of some one line of goods which might make this possible, even at present prices of cotton. As a general rule, however, the mills which have to take cotton at current prices of today and accept the current prices of goods today are not running at a profit. There is a percentage possibly which are running without showing a loss, provided depreciation be omitted. Quite a number are running at losses that would about balance the losses of stopping and starting again. There is a percentage running at considerable loss. I should say that for a mill to sell goods on the current market and clear enough to charge off a reasonable depreciation and make a dividend a little above the average interest rate, that cotton would have to stand such a mill about 12½ cents."

The Plant at Eatonton, Ga.

The Manufacturers' Record in its issue of March 24 referred to the improvements being made by Messrs. Floyd & Co. at Eatonton, Ga. There were some minor inaccuracies in that statement. The facts are that Messrs. J. B. and T. B. Floyd of Savannah, Ga., have purchased the Eatonton Electric Co. and the Eatonton Electric Cotton Mill and will operate under the title of Floyd & Co. at Eatonton. They have nearly completed an additional building, 100x146 feet, and will install additional machinery, to include 1500 spindles and 112 looms. H. C. Dresser of Macon, Ga., drew the plans for the addition. The mill will be electrically driven, and the firm is now developing the water-power to generate the electricity. A new generator and copper wiring will be purchased. O. B. Nisbet is manager.

A 30,000-Spindle Mill.

An extensive and important cotton-manufacturing plant will be established at Asheville, N. C. It will be a modern factory, to have 30,000 spindles and 1000 looms for the manufacture of fine yarns and print cloths—sateens, lawns, etc. Messrs. W. E. Lucas, president of the Watts Mills and the Laurens Cotton Mills at Laurens, S. C.; J. E. Sirrine, the well-

known mill engineer of Greenville, S. C., and their associates intend to establish the plant, offering to invest \$450,000 provided Asheville investors will take \$120,000 worth of stock in the corporation to be organized. The business men anticipate no difficulty in raising this amount. It is planned to utilize the power furnished by the Weaver Power Co.'s water-power-electrical developments, W. T. Weaver being president of this company. Some months ago the Manufacturers' Record stated that endeavors would be made to secure a large mill in connection with this power project.

The mill would require nearly 600 employees and have a pay-roll of about \$2000 per week. Its importance as an industrial enterprise is evident.

The Cotton Movement.

The amount of cotton brought into sight during the seven months ended March 31, according to the report of Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, was \$9,205,653 bales, a decrease under the same period last year of 334,013 bales; exports were 5,235,541 bales, a decrease of 651,283; takings by Northern spinners 1,883,427 bales, an increase of 76,587; by Southern spinners 1,458,832 bales, an increase of 56,629 bales. The amount brought into sight during 221 days ending April 8 was 9,285,913 bales, a decrease of 378,515 bales; exports were 5,298,589 bales, a decrease of 425,790 bales; takings by Northern spinners 1,913,659 bales, an increase of 61,104; by Southern spinners 1,502,042 bales, an increase of 54,913 bales.

New England Manufacturers.

The annual meeting of the New England Cotton Manufacturers' Association will be held at Boston on April 27 and 28. Papers may be expected on the advantages of rope transmission in textile plants, approximate cost of mill buildings, carding department, curtailment of production, electric transmission of power, Egyptian cotton, foreign markets for cotton goods, gas power applied to the textile industry, humidity in textile manufacturing, method of preparation for mill managers, origin of sewing cotton, universal yarn assorting balances, variable traverse motion, and web spindles.

The Mill at Selma, N. C.

The proposed cotton-mill company at Selma, N. C., referred to last week, has effected permanent organization, and the capital stock of \$100,000 has been all subscribed. The company's title has not been selected, but the officers are: President, N. E. Edgerton; vice-president, M. C. Winston, secretary-treasurer and general manager, R. B. Whitley. As previously stated, the textile equipment will be 5000 spindles for manufacturing yarn warps, Nos. 20 to 30. A 250-horse-power steam plant will be installed, and the engine and boiler for this are wanted.

A \$150,000 Knitting Plant.

The George W. Kavanagh Manufacturing Co. of Cohoes, N. Y., will establish a \$150,000 knitting plant at Columbus, Miss. It was recently noted that the Progressive Union of Columbus was negotiating for this industry, and the members of the company have also been mentioned as seeking a site in the South for such a mill. A modern building will be erected and an equipment of machinery will be installed for manufacturing fleece-lined underwear, to employ probably 200 persons.

Adding 5000 Spindles and Looms.

The Millfort Mill Co. of Fort Mill, S. C., will about double its plant, expending nearly \$100,000 for the improvements. Construction work will be begun at once

and pushed to an early completion. There will be erected a two-story 60x100-foot addition to present building. In the space thus provided will be installed 5000 spindles and 150 looms for weaving gingham, together with the necessary complementary apparatus. The company's present mill has 5760 ring spindles and 313 looms.

Textile Notes.

Arlington Cotton Mills, Gastonia, N. C., capitalized at \$130,000, has declared a semi-annual dividend of 4 per cent.

Messrs. P. S. Bailey and W. H. Shands of Clinton, S. C., will organize a company, with capital stock of \$12,000, to establish a knitting mill.

Spencer Mountain Mills, Lowell, N. C., contemplates building an additional mill to have an equipment of 10,000 spindles. A final decision has not been reached.

Dickson Cotton Mills, Laurinburg, N. C., will install 1920 spindles additional, and has awarded contract for the machinery. The company may possibly determine to add another 2000 spindles later on.

Wadesboro (N. C.) Cotton Mills Co.'s stockholders have decided to raise the necessary funds to discharge their indebtedness and reorganize the company. An order has been issued for the discharge of the receivers. About 8300 spindles are operated.

A correspondent informs the Manufacturers' Record that the cotton-duck mill to be built at Paris, Texas (detailed at some length last week), will be capitalized at \$750,000. J. E. Sirrine of Greenville, S. C., will be the contracting engineer, and that the plant will be electrically driven.

The W. J. Hooper Manufacturing Co.'s large net and twine mill, which was recently reported at length in this column, will have 80 looms. This equipment will be operated exclusively on the production of netting. The plant is at Baltimore, and the erection of the \$60,000 building for same has been commenced.

Last week this column referred to the rumors that R. R. Haynes and associates of Henrietta, N. C., will organize company to build a cotton factory at Caroleen, N. C. It can be authoritatively stated that a large plant is contemplated in that vicinity by Mr. Haynes and his associates, but no details are ready for publication at this time.

The Talladega (Ala.) Company has awarded contract for the construction of dam which is to develop from 2500 to 3000 horse-power. This power will be transmitted by electricity for furnishing light and power. In connection with this development it is proposed to build a \$50,000 knitting mill, and Boston manufacturers are reported as contemplating a 10,000-spindle and 300-loom cotton-cloth mill also.

QUOTATIONS OF COTTON YARNS.

By Paulson, Linker & Co., New York, Philadelphia and Chicago, April 12.

No. 10s-1 and 12s-1 warps.....	21	61	—
No. 14s-1 warps.....	21	61	21½
No. 16s-1 warps.....	21½	61	22
No. 20s-1 warps.....	22	61	22½
No. 24s-1 warps.....	22	61	23½
No. 28s-1 warps.....	22	61	—
No. 12s-1.....	21	61	—
No. 14s-1.....	21½	61	—
No. 16s-1.....	22	61	—
No. 8s-2 ply soft yarn.....	20½	61	21
No. 10s-2 ply soft yarn.....	21	61	21½
No. 8s-2 ply hard.....	20½	61	—
No. 10s-2 ply hard.....	21	61	—
No. 12s-2 ply hard.....	21½	61	—
No. 14s-2 ply.....	22	61	22½
No. 20s-2 ply.....	23	61	—
No. 24s-2 ply.....	23½	61	24
No. 28s-2 ply.....	24	61	—
No. 30s-2 ply.....	24½	61	—
No. 36s-2 ply.....	25	61	—
No. 40s-2 ply.....	25½	61	—
No. 48s-2 ply.....	26	61	—
No. 56s-2 ply.....	26½	61	—
No. 64s-2 ply.....	27	61	—
No. 72s-2 ply.....	27½	61	—
No. 80s-2 ply.....	28	61	—
No. 8s-3, 4 and 5 ply.....	20½	61	—
No. 10s-3 ply chain warps.....	21½	61	24
No. 12s-3 ply chain warps.....	22½	61	—
No. 14s-3 ply chain warps.....	23½	61	—
No. 16s-3 ply chain warps.....	24½	61	—
No. 18s-3 ply chain warps.....	25½	61	26½
No. 16s-3 ply hard twist.....	23	61	—
No. 20s-3 ply hard twist.....	23½	61	24
No. 24s-3 ply hard twist.....	24½	61	—

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LUMBER

Big Deals in Louisiana.

The Louisiana Construction Co. of Newport, Ark., has purchased 100,000 acres of timber land in the northern part of Avoyelles parish for \$950,000. This land was bought five years ago at a cost of from \$1.50 to \$2 an acre, yielding a profit in five years of \$700,000. It is announced that the purchasing company intends to establish on the tract mills and factories to make staves, cross-ties, wagon material and building material, and to run into it a railroad, and that at least \$2,000,000 will be spent in developing the tract. Commenting on this sale the New Orleans Picayune says:

"This deal is of immense importance to the parish and to New Orleans, because the establishment of so large an enterprise means the awakening of a region near the city—not more than 170 miles away—which must result in its profit. It is chiefly valuable, however, in showing local operators that magnificent opportunities lie within their grasp which will be seized by Northern operators if they are not taken promptly."

The St. Bernard Cypress Co. has purchased for nearly \$250,000 hundreds of acres of cypress lands in St. Bernard parish, Louisiana, beside 100,000,000 feet of cypress. The company may either erect a saw-mill or may sell the cypress to a large Western furniture factory which is negotiating for it, and which would erect saw-mills to get out the cypress.

Shipments From Gulfport.

During March there were shipped from Gulfport, Miss., 25,132,000 feet of lumber, and during the first three months of this year 69,106,000 feet, or more than 27,000,000 feet more than the shipments in the first six months of 1903. The shipments, in vessels having an aggregate of 28,551 tonnage and of draft ranging from 13 to 22 feet, went to Brazil, the Argentine Republic, Cuba, Wales, Germany, Holland and Ireland.

Lumber Notes.

A trainload of desks made at the factory of the Winston (N. C.) Furniture Co. was shipped last week, with Liverpool, England, as its ultimate destination.

The J. F. Keith Lumber Co. of Beaumont has acquired control of a body of pine land in Hardin county, Texas, upon which there are 80,000,000 feet of timber.

A meeting of turpentine producers of the Carolinas and Georgia was held at Savannah last week to consider, it was stated by an outsider, the matter of competition with the recently-organized plants, which are producing turpentine by the steaming process.

All the mills of the Norfolk section and of North Carolina have been able to secure enough logs to operate the mills to about 80 per cent. of their capacity, and by the end of this month it is expected that enough rough timber will begin to arrive to permit the plants to operate to their limit. Demands for all kinds of manufactured timber have been very heavy recently.

The Retail Lumber Dealers' Association of Mississippi and Louisiana has elected B. A. Tucker of Senatobia, Miss., president; L. C. Allen of Shreveport, La., vice-president; W. G. Harlow of Yazoo City, Miss., secretary and treasurer; O. B. Hopkins of Lafayette, La.; C. C. Hardman of Shreveport, La.; L. D. Spencer of Hammond, La.; J. J. Harty of Greenville, Miss.; R. H. Barnett of Greenwood, Miss.; E. W. Burton of Pickens, Miss., and H. W. Durant of Coffeeville, Miss., members of the executive committee.

Construction Department

TO OUR READERS!

In order to understand and follow up properly the Construction Department items, please bear in mind the following statements:

EXPLANATORY.

The MANUFACTURERS' RECORD seeks to verify every item reported in its Construction Department by a full investigation and complete correspondence with everyone interested. But it is often impossible to do this before the item must be printed, or else lose its value as news. In such cases the statements are always made as "rumored" or "reported," and not as positive items of news. If our readers will not these points they will see the necessity of the discrimination, and they will avoid accepting as a certainty matters that we explicitly state are "reports" or "rumors" only. We are always glad to have our attention called to any errors that may occur.

*Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery, Proposals and Supplies Wanted."

In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the MANUFACTURERS' RECORD.

ADDRESS FULLY.

To insure prompt delivery of communications about items reported in these columns, the name of one or more incorporators of a newly incorporated enterprise should be shown on the latter addressed to that town, or to the town of the individual sought, as may be shown in the item, as sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. This will help to insure prompt delivery of your communication, although it is inevitable that some failures on the part of the postal authorities to deliver mail to new concerns will occur.

WRITE DIRECTLY.

It is suggested to advertisers and readers that in communicating with individuals and firms reported in these columns, a letter written specifically about the matter reported is likely to receive quicker and surer attention than a mere circular.

BALTIMORE BUILDING NOTES.

Business Buildings.

Baltimore—Store Building.—Alexander Yearley & Sons, Builders' Exchange Building, Lexington and Charles streets, will rebuild store building destroyed by fire at 6 E. Baltimore street. Structure to be three stories high, 20x70 feet; brick with store front; electric wiring and fixtures; sanitary plumbing; steam-heating system.

Baltimore—Restaurant.—George W. Hyde, 221 W. Lexington street, has engaged Charles M. Anderson as architect, 333 N. Charles street, to prepare plans and specifications for the Crown Lunch Room, to be located on its old site, 223 E. Baltimore street. Structure to be three stories high; 26.8x102 feet; of brick with ornate front; tin roofing; electric wiring and fixtures; sanitary plumbing; steam-heating system. All the equipment for a thoroughly modern lunch room will be installed.

Baltimore—Store and Dwellings.—Henry R. Douloug, 3901 O'Donnell street, has awarded contract to George E. Borchard, builder, 229 N. Castle street, for erection of three stores and dwellings to be located at 601, 603 and 605 E. Lombard street. Structures to be three stories high; 25x60; 16x60 and 16.60x 60 feet, with two-story rear buildings 13x21 feet; brick front; concrete foundations; galvanized-iron cornices; tin roofing; store fronts; sanitary plumbing; hot-water heating system. Cost to be about \$3500. Plans and specifications were prepared by Harry Holloway, architect.

Baltimore—Warehouses.—James A. Gary, 305 Fidelity Building, Lexington and Charles streets, will rebuild his warehouses destroyed by fire at 106 and 108 W. German street. It is reported that John Waters, builder, 23 E. Center street, will construct the buildings.

Baltimore—Warehouses, etc.—John D. Rockefeller of New York, having communicated his intention to give \$500,000 to Johns Hopkins Hospital, there is now no doubt as to that institution rebuilding its warehouses and other business buildings destroyed by the recent fire. The real estate

loss of the hospital was nearly \$400,000. J. Thomas, manager for the estate, has offices at 211 N. Charles street.

Baltimore—Business Buildings.—H. V. Ward, southwest corner Park avenue and Centre street, as agent for the estate, has engaged Parker & Thomas, architects, 612 N. Calvert street, to prepare plans and specifications for business buildings, one to be located on the corner of Baltimore and Charles street, and the other on the corner of Charles street and Bank lane.

Baltimore—Store Building.—Lemuel T. Appold, Colonial Trust Co., Saratoga street, near Charles, has engaged Sperry, York & Sawyer, architects, Builders' Exchange Building, Lexington and Charles streets, to prepare plans and specifications for store building to be located at 8 E. Baltimore street.

Baltimore—Warehouse.—Lockwood, Greene & Co., architects and engineers, of Boston, with Baltimore office at 211 N. Calvert street, in charge of Wm. B. Laine, are preparing plans and specifications for warehouse for Wm. K. Cromwell, president of Gandy Belting Co., Fremont and Pratt streets, to be located on Lombard street, near South. Structure to be five stories high with basement; 26x106 feet; brick; concrete foundation; tar and gravel roofing; most modern slow-burning construction; electric wiring and fixtures; sanitary plumbing; steam-heating system; one freight power elevator; metal sashes and frames throughout building; sprinkler system to be installed inside building.

Baltimore—Warehouse.—Frank P. Coleman, 30 Harford avenue extended, has awarded contract to Frederick Decker & Son, builders, 129 E. Biddle street, for erection of his warehouse to be located at 62 Center Market Space. Structure to be three stories high; 15x90 feet; brick; concrete foundation; tin roofing; galvanized-iron cornice; store front. Cost to be about \$3000.

Baltimore—Hotel.—Patrick Kirwan, 104 W. Fayette street, has purchased the site 9 W. Fayette street, and will build hotel and restaurant. Structure to be four stories high with basement; 19x75 feet; brick with marble trimmings; tile flooring; metal ceilings; electric wiring and fixtures; sanitary plumbing; steam-heating system; basement to be equipped as barber shop; first floor as restaurant; second floor as billiard and pool rooms, and third and fourth floors to contain 15 to 20 sleeping rooms. Architect and contractor not engaged.

Baltimore—Church.—Barnes & Haskell, architects, Central Savings Bank Building, Lexington and Charles streets, are preparing plans and specifications for church building to be located on Baltimore street, between Pulaski and Payson streets. The plans are expected to be finished in a few days.

Baltimore—Warehouse.—John D. Modtz, 928 Cathedral street, has awarded contract to Francis J. Fox, builder, 1839 E. North avenue, for erection of warehouse to be located at 394 Exchange Place. Structure to be four stories high; 23x50 feet; brick, iron and glass front; cement and brick foundation; galvanized-iron cornice; slag roofing; electric wiring and fixtures; sanitary plumbing; power elevator. Cost to be about \$7000.

Baltimore—Dwellings.—Oliver P. Roberts, 2636 E. Pratt street, will erect for himself six dwellings to be located on E. Baltimore street, near Patterson Park avenue, after plans and specifications prepared by Z. F. Potter, architect, 2507 E. Fairmount avenue. Structures to be three stories high, 18.9x39.6 feet, with two-story back buildings 35.6x15 feet; pressed-brick fronts; marble trimmings; cement and brick foundations; galvanized-iron cornice; tin roof; sanitary plumbing; steam or hot-air heating systems; cost to be about \$4000 each.

Baltimore—Store Building.—The Safe Deposit & Trust Co., 13 South street, as agent for the Tucker estate, has engaged Archer & Allen, architects, Central Savings Bank Building, Lexington and Charles streets, to prepare plans and specifications for store building to be located at 103 W. Baltimore street. Structure to be 25x60 feet; brick with terra-cotta trimmings and ornate front; steel and fire proof construction; electric wiring and fixtures; sanitary plumbing; steam-heating system.

Baltimore—Warehouse.—The Safe Deposit & Trust Co., 13 South street, as agent for the estate of James Sloan, Jr., has engaged Sperry, York & Sawyer, architects, Builders' Exchange Building, Lexington and

Charles streets, to prepare plans and specifications for warehouse to be located at 28 Hanover street. Structure to be five stories high with basement; 28x107 feet; brick with terra-cotta trimmings; concrete foundation; steel and fireproof construction; electric wiring and fixtures; sanitary plumbing; steam-heating system; power elevator, and equipped with wire glass. Cost to be about \$32,000.

Baltimore—Warehouse.—The Safe Deposit & Trust Co., 13 South street, as agent for the Powell estate, has engaged R. W. Gibson, architect, 76 William street, New York, to prepare plans and specifications for warehouse to be located at 108 South street. Structure to be four stories high; 25x135 feet; brick front; concrete foundation; steel and fireproof construction; electric wiring and fixtures; sanitary plumbing; power elevator, and will have office front. Cost to be about \$20,000.

Baltimore—Store Building.—Maryland Bible Society, Charles and Saratoga streets, has decided as to its new structure recently reported. New building will be four stories high; ground floor for use of society; other floors for offices or other business purposes; site is north side of Lexington street, near Charles street. Sperry, York & Sawyer, architects, Lexington and Charles streets, will prepare the plans and specifications. B. F. Bennett, 123 S. Howard street, will be the contractor.

Baltimore—Baltimore & Ohio Building.—There have been and continue to be various rumors and reports regarding the intentions of the Baltimore & Ohio Railroad Co. with reference to rebuilding its office structure at Baltimore and Calvert streets. The company has as yet made no final decision, but it is probable that additional land will be purchased either at the old location or near Camden Station as site for a new building. As soon as the company has made a decision the proper announcement will appear in these columns. Oscar G. Murray is president; offices at Charles and Saratoga streets.

Baltimore—Warehouse.—Rufus Woods, Hoen Building, North and Lexington streets, has engaged the Woodruff-McLaughlin Company, architect, Lexington and St. Paul streets, to prepare plans and specifications for and superintend the construction of warehouse to be located at 419 and 421 E. Lombard street. Structure to be four stories high; 50x 140 feet; iron spotted brick front; Medina sandstone trimmings; concrete foundation; steel beams; modern slow-burning construction; slag roofing; fireproof vault; concrete and steel constructed boiler room; electric wiring and fixtures; sanitary plumbing; steam-heating system; one electric elevator; low-pressure boiler; cost to be about \$35,000.

Baltimore—Warehouses and Store Buildings.—William Kleinle, 301 S. Paul street, has engaged the Woodruff-McLaughlin Company, architect, Lexington and St. Paul streets, to prepare plans and specifications for and superintend the construction of three warehouses and store buildings to be located at 413, 415 and 417 Exchange Place. Structures to be five stories high with basement; 72x140 feet; pressed-brick front with Medina sandstone trimmings; concrete foundations; steel beams; gravel roofing; sanitary plumbing; three electric elevators; three plate-glass store fronts with prismatic glass transoms; cost to be about \$50,000 for the three.

Baltimore—Warehouse.—Thomas C. Kennedy, architect, 331 N. Charles street, has been engaged to prepare plans and specifications for warehouse to be located at 613 E. Baltimore street. Structure to be three stories high, and contain all the facilities of a modern warehouse.

Baltimore—Church.—Charles E. Cassell & Son, architects, southwest corner Charles and Saratoga streets, will prepare plans and specifications for structure to replace the burned edifice of the Church of the Messiah at Fayette and Gay streets, the building to cost about \$50,000. Reference has been previously made to this church. Rev. Peregrine Wroth, 215 E. Preston street, is the pastor.

Baltimore—Bank Building.—L. H. Neudecker, president Southern Trust & Deposit Co., Gay and High streets, has awarded contract to Charles L. Stockhausen, builder, 414 E. Fayette street, for erection of branch of his bank building, lately mentioned, to be located at 197 Marsh Market Space. Structure to be three stories high; 25x60 feet; Pompeian brick front, with bluestone trimmings; concrete foundation; steel beams; galvanized-iron cornice; tin roofing; sanitary plumbing; cost to be about \$7500.

Baltimore—Office Building.—John R. Pope of Newport, R. I., will prepare plans and specifications for the office building which Mrs. Henry Barton Jacobs, 5 Mt. Vernon Place, will erect at southwest corner of German and South streets. The new structure will probably be 10 or 12 stories high, and will be built after the most approved plans, with all modern improvements. Reference was lately made to this building.

Baltimore—Store Building.—S. Hornstein and Hyman Washinsky, referred to last week as to build at 194 and 106 Marsh Market Space, have let contract to Ehrardt Eyring, 628 Third street, for erection of the structure. Building will be for store and restaurant purposes; 25x50 feet; three stories high; to cost \$10,000.

Baltimore—Warehouse.—Wm. H. Brown, 404 S. Entaw street, has awarded contract to H. C. Smyser, 13 N. Carey street, for the improvements to his six-story 55x140-foot building at 404 S. Entaw street. About \$6500 will be the expenditure. Will equip with steam heat, electric wiring and fixtures for lighting, power elevator, etc. Building will be occupied by Brown Implement Co., J. Clarence Brown, manager. (This building was recently mentioned, but not in full detail.)

Baltimore—Business Building.—Louis Federleht, 527 W. Baltimore street, has engaged J. E. Laferty, architect, Builders' Exchange Building, Lexington and Charles streets, to prepare plans and specifications for his business building to be located on southeast corner Baltimore and Liberty streets. Structure to be four or five stories high and contain modern facilities for wholesale woollens business. Israel Griffith, builder, Builders' Exchange Building, Lexington and Charles streets, has contract for erection of building.

Baltimore—Warehouse.—L. H. Neudecker, president Southern Trust & Deposit Co., Gay and High streets, has awarded contract to Charles L. Stockhausen, builder, 414 E. Fayette street, for erection of warehouse to be located at 105 Marsh Market Space. Structure to be three stories high, 25x60 feet; Pompeian brick front, with bluestone trimmings; concrete foundation; steel beams; tin roofing; sanitary plumbing; cost to be about \$7500.

Baltimore—Restaurant and Office Buildings.—L. H. Neudecker, president Southern Trust & Deposit Co., Gay and High streets, has awarded contract to Charles L. Stockhausen, builder, 414 E. Fayette street, for erection of two buildings to be located on east Lombard street, near Marsh Market Space, one to be an office building and the other a restaurant. Structures to be three stories high; 25x60 feet; Pompeian brick fronts, with bluestone trimmings; concrete foundations; steel beams; galvanized-iron cornice; tin roofing; sanitary plumbing; cost to be about \$7500 each.

Baltimore—Lunch Room.—L. H. Neudecker, president Southern Trust & Deposit Co., Gay and High streets, has awarded contract to Charles L. Stockhausen, builder, 414 E. Fayette street, for erection of lunch room to be located in the rear of 105 and 117 Marsh Market Space. Structure to be one story high; 50x60 feet; brick; concrete foundation; tin roofing, with large skylights; electric wiring and fixtures; sanitary plumbing; steam-heating system; cost to be about \$2000.

Baltimore—Business Buildings.—George Clothier, Jr., 612 Fidelity Building, Lexington and Charles streets, reported recently as preparing plans and specifications for Napoleon B. Lobe's \$50,000 office building, details concerning which were reported fully last week, is also preparing plans and specifications for several other business buildings to be located in the burned district. The Lobe Building will contain 36 offices and two store fronts.

Baltimore—Bank Building.—The National Mechanics' Bank, Maryland Telephone Building, Lexington and Courtland streets, has engaged Taylor & Knowles, architects, of New York, to prepare plans and specifications for its new banking structure to be located at the northwest corner of South and German streets.

Baltimore—Bank Building.—The National Exchange Bank, 517 W. Baltimore street, has secured option on properties at 7 and 9 S. Liberty street and 129 W. Baltimore street, and will add them to its old site, on which will probably be erected a two-story structure, the second floor to be occupied by the Merchants and Manufacturers' Association.

Baltimore—Church.—Independent Methodist Church of the Nazarene, Saratoga and

Monroe streets, will build edifice, for which plans and specifications have been prepared by George Clothier, architect, 2122 Chelsea Terrace. Structure to be 38x60 feet; of stone; parsonage in rear; church to seat 500; about \$12,000 to be expended. The architect invites bids on construction.

Baltimore—Carpenter Shop.—Henry Smith & Sons Co., builder, 116 S. Register street, will erect for its own use carpenter shop at 30 and 32 S. Eden street. Structure to be two stories high; 47.4x54 feet; brick; concrete foundation; slag roofing; galvanized-iron cornice; cost to be about \$300.

Baltimore—Store and Office Building.—George Clothier, architect, 612 Fidelity Building, Charles and Lexington streets, who prepared the plans and specifications for store and office building (reported last week) for Napoleon B. Lobe to cost about \$50,000, invites bids for the erection of the building.

Baltimore—Bank Building.—The First National Bank, 16 W. Saratoga street, has engaged T. Henry Randall of New York as architect to prepare the plans and specifications for its banking structure on South street. It is probable that the building will be one story high, for exclusive use of the bank. This building previously mentioned.

Baltimore—Office Building.—George R. Vickers, Jr., 1317 Eutaw Place, contemplates the erection of a four-story office building on German street, near South street. Structure to be of stone, iron and brick, and have 45 office rooms. Andrews & Thomas, contractors, are clearing the site.

Baltimore—Bank Building.—Hambleton & Co., bankers, 12 E. Lexington street, have engaged Baldwin & Pennington, architects, 311 N. Charles street, to prepare plans and specifications for their banking structure on Calvert street, near German. J. & S. H. Lamb, builders, 253 W. Preston street, are clearing the site, and will erect the new building.

Baltimore—Office Building.—William A. Gault & Son, 16 E. Lexington street, have awarded contract to John Hughes, Jr., builder, 232 St. Paul street, for erection of their office building on East Lexington street. Structure to be five stories high and modern in every respect. Haskell & Barnes, architects, Central Savings Bank Building, Charles and Lexington streets, prepared the plans and specifications. Details of this building were recently reported in this column.

Baltimore—Warehouse.—J. O. Linton of W. A. Simpson & Co., 361 North street, as agent for Misses Alice and Camilla Simpson, will erect warehouse at southwest corner South and Guilford streets, after plans and specifications of W. H. Hodges, architect, Wilson Building, Charles and Saratoga streets. Structure to be four stories high with basement; 54x136.8 feet; brick front with bluestone trimmings; concrete foundation; steel beams and girders; cast-iron columns; galvanized-iron cornice; slag roofing; fire shutters; granolithic pavement; electric wiring and fixtures; sanitary plumbing; steam-heating system; three elevators; wire glass in front doors; cost to be about \$22,000.

Baltimore—Warehouse.—The Deford Company, 206 St. Paul street, will erect warehouse at Grant, Hollingsworth and Matthew streets after plans and specifications of W. H. Hodges, architect, Wilson Building, Charles and Saratoga streets. Structure to be four stories high; 42.6x121.9 feet; sand-brick front with bluestone trimmings; concrete foundation; steel beams and girders; cast-iron columns; fire shutters; galvanized-iron cornice; slag roofing; wire-glass skylight; granolithic pavement; electric wiring and fixtures; sanitary plumbing; one electric elevator; wooden paved driveway; cost to be about \$25,000. Plans are now in the hands of selected bidders.

Baltimore—Store Building.—Jacob Horowitz, 226 W. Lombard street, has awarded contract to Albinus Schuck, builder, 3302 E. Baltimore street, for erection of store building at northeast corner High and Lombard streets. Structure to be three stories high; 14x32 feet; pressed-brick front; tin roofing; sanitary plumbing; galvanized-iron cornice; store front; cost to be about \$300.

Baltimore—Dwellings.—E. A. Blackshere, 245 Eutaw Place, has let contract to Joseph B. Yeatman, builder, 2123 Hollins street, for erection of 23 two-story dwellings on North, near Slingluff avenue. Each building 14x50.8 feet; fronts of Pompeian brick; trimmings of Beaver Dam marble; furnace heat; cost to be about \$35,000. Plans and specifications have been prepared by Marvin H. Murray, architect.

Baltimore—National Marine Bank.—The National Marine Bank, temporary offices at 206 N. Calvert street, has accepted plans and specifications for its bank building to be located at Gay and Water streets and be exclusively for the bank's use. Drawings show

a structure four stories high, 55x165 feet; Renaissance style, exterior treatment being of red Colonial brick and buff terra-cotta; banking room to be 90x22 feet high (two stories); private offices for president, cashier and patrons; large fireproof vault; banking floor of mosaic, with high marble wainscoting and ornamental walls and ceilings; corridors of marble terrazzo mosaic, with marble base at sides; marble treads on stairways; modern sanitary plumbing; two or more elevators; 50 offices in entire building, etc. George R. Vickers, Jr., is chairman of building committee.

Baltimore—Business Building.—W. Burns Trundle, 301 St. Paul street, has not as yet engaged architect or contractor for building at 7 E. Lexington street, for which he is the agent.

Baltimore—Chamber of Commerce.—Chamber of Commerce Building Co., 311 N. Charles street, has invited five architects to submit plans and specifications for erecting Chamber of Commerce Building, previously mentioned. The only data given the architects is that the site is 82x186 feet, and that the cost of the building must not exceed \$25,000. Parker & Thomas, architects, 215 N. Calvert street; Henry Brauns, 113 W. Saratoga street, and Baldwin & Pennington, 311 N. Charles street, are among the architects invited.

Baltimore—Church.—E. H. Glidden, architect, 419 N. Charles street, has completed plans and specifications for the proposed edifice to be erected by the Olive Branch United Evangelical Congregation, Charles street and Fort avenue. About \$15,000 will be expended. Plans will be given to bidders today.

Baltimore—Store Buildings.—William D. Randall, 261 Robert street, has awarded contract to Brady & Watters, builders, 532 St.

Paul street, for erection of two store buildings at 408 and 410 E. Baltimore street, after plans and specifications of H. S. Magruder, architect, 418 St. Paul street. Structures to be two stories high; 35x110 feet; Colonial brick front, with Baltimore county limestone trimmings; steel beams; galvanized-iron cornice and architrave; tin roofing; two plate and leaded glass store fronts; sanitary plumbing; steam-heating systems.

Baltimore—Warehouse.—George R. Galtner, 224 St. Paul street, has engaged Wyatt & Nolting, Builders' Exchange Building, Lexington and Charles streets, as architects to prepare plans and specifications for erection of warehouse on the northwest corner Hanover and German streets. Structure to be five stories high; 65x97 feet; brick front, with terra-cotta trimmings; steel beams and girders; tin or slag roofing; electric wiring and fixtures; sanitary plumbing; power elevators.

Baltimore—Warehouse.—George R. Galtner, 224 St. Paul street, has engaged Wyatt & Nolting, Builders' Exchange Building, Lexington and Charles streets, as architects to prepare plans and specifications for warehouse at 111 W. Baltimore street. Structure to be five stories high; 25.3x130 feet; brick front, with terra-cotta trimmings; steel beams and girders; tin or slag roofing; concrete foundation; electric wiring and fixtures; sanitary plumbing; steam-heating system; power elevator.

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capital stock being \$25,000. The company will deal in cement and other building materials, and in contractors' tools; offices in Builders' Exchange, Lexington and Charles streets.

Baltimore—Brick Works.—The Baltimore Vitreous Clay Co. has been incorporated, with capital stock of \$150,000, and will establish plant for the manufacture of bricks, the daily output to be 75,000. A site has been purchased at Spring Gardens, including a 2000-foot water front, affording facilities for shipments by water, and the Baltimore & Ohio Railroad is at hand for rail shipments. Contracts for most of the mechanical equipment have been awarded. The company has organized with J. Kemp Bartlett, president; H. L. Carter, secretary, and B. J. Bond, treasurer. Offices have been established at 100 E. Lexington street, where Mr. Bond can be seen.

Baltimore—Steam Laundry.—The Yale Laundry, Fayette street, between Greene and Paca streets, will rebuild at 106 W. Fayette street. Building to be two stories high, 46x82 feet, with basement; ornamental front; brick and terra-cotta construction; to cost about \$25,000. W. B. Upton, architect, of Washington, D. C., prepared the plans and specifications.

Baltimore—Trousers Factory.—The Wear Well Pants Co. has been incorporated for the manufacture of pants, with a capital stock of \$20,000. The incorporators are Emil Crockin, 325 W. Baltimore street; Jacob S. Hornstein, Jacob M. Raffel, William B. Bamberger and Charles Abramson.

Baltimore—Candy Factory.—Messrs. Lauer & Suter, candy manufacturers, have purchased for \$50,000 the four-story warehouse at 1422 to 1428 Philpot street, the structure being 80x140 feet in size. They intend to convert the building into a modern candy-manufacturing plant, installing the necessary machinery, etc.

Baltimore—Marble Works.—George Mann (not Charles Mann, as given last week) has purchased from the Spring Garden Wharf & Land Co. a tract of land as site for the establishment of marble works. The Manufacturers' Record has not yet secured the exact address of Mr. Mann, but he was formerly with Hamilton & Mann, stoneworkers.

Baltimore—Boiler Works.—John B. Fluskey, Jr., 1502 E. Oliver street, manufacturer of boilers, will establish a plant at Wood street and Dugan's Wharf.

Baltimore—Electrotyping and Engraving Plant.—A. W. Harrison, 122 Alsquith street, has engaged the Woodruff-McLaughlin Company, constructing engineers and architects, Lexington and St. Paul streets, to prepare plans and specifications for his electrotyping and engraving plant (previously mentioned) at 15 and 17 S. Frederick street. Structure to be four stories high; 52x130 feet; pressed-brick front, with terra-cotta trimmings; concrete foundation; steel beams and girders; slag roofing; electric wiring and fixtures; sanitary plumbing; elevators; boilers; engines, etc. The Woodruff-McLaughlin Company will also superintend the construction of the building.

Baltimore—Bag Factory.—The American Lumber Co., Central Savings Bank Building, Lexington and Charles streets, has awarded contract to Gustavus Stohr, builder, 1334 N. Stricker street, for erection of bag factory building at 1407 Philpot street. Structure to be two stories high, 70x156 feet, with back building one story high, 47x93 feet; brick, with stone foundation; slag roofing, and one elevator; cost to be about \$12,000. Machinery for manufacturing burlap bags will be installed. John C. Grafflin & Co., bag manufacturers, temporarily located at 606 N. Charles street, will occupy the building when completed. (This enterprise referred to last week.)

Baltimore—Plumbing Supplies.—The Southern Supply Co. has been incorporated, with capital of \$50,000, succeeding the jobbing department in plumbing supplies of the J. Regeater's Sons Co., offices at Holliday and Saratoga streets, where the new company will be located. General plumbing supplies, water, steam and gas supplies, will be manufactured and jobbed throughout the section tributary to the company's facilities. E. A. Marshall is president, and E. J. Walter, secretary-treasurer. The Regeater Company will, of course, continue its other departments for manufacturing, brass founding, etc.

Baltimore—Conrad Klank, 214 N. Charles street, owner of property located at the northeast corner of Lombard and Charles streets, states that he will not rebuild, but offers it for sale.

Baltimore—Building Materials Wanted.—Charles Gilpin, builder, 21 E. Saratoga street, wants bids on the following building equip-

Detailed Information

As to every building to be erected in Baltimore, its character, size, method of lighting, heating, etc., is published by the MANUFACTURERS' RECORD. Every industrial and railroad enterprise, every municipal improvement, every important building projected in the whole South is covered with the same painstaking detail in advance of all other publications. Those who need this information daily can find it in the *Daily Bulletin of the Manufacturers' Record*, subscription price \$25 a year. The *Daily Bulletin* is published every business day in the year for the purpose of enabling manufacturers, contractors, engineers and others to keep in daily touch with the rebuilding of Baltimore and the industrial, railroad and financial development of the South and Southwest.

Paul street, for erection of two store buildings at 408 and 410 E. Baltimore street, after plans and specifications of H. S. Magruder, architect, 418 St. Paul street. Structures to be two stories high; 35x110 feet; Colonial brick front, with Baltimore county limestone trimmings; steel beams; galvanized-iron cornice and architrave; tin roofing; two plate and leaded glass store fronts; sanitary plumbing; steam-heating systems.

Baltimore—Warehouse.—George R. Galtner, 224 St. Paul street, has engaged Wyatt & Nolting, Builders' Exchange Building, Lexington and Charles streets, as architects to prepare plans and specifications for erection of warehouse on the northwest corner Hanover and German streets. Structure to be five stories high; 65x97 feet; brick front, with terra-cotta trimmings; steel beams and girders; tin or slag roofing; electric wiring and fixtures; sanitary plumbing; power elevators.

Baltimore—Warehouse.—George R. Galtner, 224 St. Paul street, has engaged Wyatt & Nolting, Builders' Exchange Building, Lexington and Charles streets, as architects to prepare plans and specifications for warehouse at 111 W. Baltimore street. Structure to be five stories high; 25.3x130 feet; brick front, with terra-cotta trimmings; steel beams and girders; tin or slag roofing; concrete foundation; electric wiring and fixtures; sanitary plumbing; steam-heating system; power elevator.

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offices; elevators; steam-heating plant, etc. Plans and specifications are being prepared by Martin C. Miller of Buffalo, N. Y.

Manufacturing Buildings and Other Enterprises.

Baltimore—Printing Plant.—Frank T. Hess, 21 S. Stricker street; S. Proctor Brady, Albert T. Evans and others have incorporated the Hess Printing Co., with capital stock of \$5000, to conduct a job printing office. Mr. Hess formerly operated a similar plant under the above name at 104 S. Gay street, in the burned district.

Baltimore—Cardboard Box Factory.—Charles C. Bartgis, 613 N. Calhoun street; George P. Bartgis, William R. Bartgis and others have incorporated the Bartgis Bros. Co., for manufacturing carton, folding and suit boxes and other cardboard products. The authorized capital is \$25,000.

Baltimore—Municipal Dock Improvements.—The city will order a special election to be held May 3 for action on the proposed loan of \$6,000,000 for wharf and dock improvements. The improvements are contemplated in connection with wharf and dock betterments to be made as a result of the recent fire. The city has heretofore owned but a few docks, and under the new plan a general ownership of such properties is proposed. Address The Mayor.

Baltimore—Bedding Factory.—Messrs. Franklin L. Groff, Louise B. Groff, Philip E. Groff and others have incorporated the International Bedding Co., with capital stock of \$20,000, for manufacturing various kinds of bedding.

Baltimore—Building Supplies.—The Hudson Cement & Supply Co., recently reported incorporated, has effected permanent organization with J. Albert Link, president, and S. A. Ver Valen, secretary-treasurer, the

ment and supplies: Bricks, bluestone, steel beams and girders, cast-iron columns, mill work, electric wiring and fixtures, plumbing and electric elevators.

Baltimore—Building Materials Wanted.—The Woodruff-McLaughlin Company, constructing engineer and architect, Lexington and St. Paul streets, wants bids on the following building equipment and supplies: Bricks, lumber, cement, sand, lime and all kinds of building supplies.

Baltimore—Building Materials Wanted.—John R. Wiggins & Co., builders, 323 St. Paul street, want prices and catalogues on all kinds of building equipment and supplies; also would like to communicate with brick layers.

ALABAMA.

Bailey—Amusement Company.—It is reported that H. C. Williamson, representing Memphis (Tenn.) capitalists, has purchased from James M. Kilburn at \$10,000 the Bailey Springs property and will establish a summer resort.

Birmingham—Coal Mines.—Macksey Coal Co. has incorporated, with \$10,000 capital, for coal mining; incorporators, Thomas F. Macksey, East Orange, N. J.; George W. Shannon and Richard J. Wulff, both of New York.

Birmingham—Sewerage.—Jefferson county sanitary commission has let contract to Black & Laird at \$117,938 for constructing five sections of the trunk sanitary sewer previously reported. Bids for remaining five sections will be opened April 28.

Birmingham—Steel Furnace.—Birmingham Steel & Iron Co. is about to begin the construction of proposed 10-ton steel furnace for producing steel castings. C. H. McMillan will be in charge of construction.

Birmingham—Foundry and Machine Shop. Incorporated: McArdle-Parker Machine Co., with \$50,000 capital, by W. Parker, Birmingham; P. H. McArdle and George St. Paul, New Orleans, La. Company will build foundry and machine shop.

Birmingham—Glass Works.—It is reported that H. B. Smith, J. T. Trant and J. B. Johnson, all of Hartford, Ind., contemplate establishing plant for manufacturing plate glass.

Citronelle—Electric-light Plant and Ice Factory.—Reports state that an electric-light plant and ice factory will be erected. H. O. McMair, cashier First National Bank, can give information.

Mobile—Publishing.—Recorder Publishing Co. has been incorporated, with \$6000 capital, to publish the Sunday Recorder; A. J. Spencer, president; E. H. Hubbard, vice-president, and F. F. Conway, secretary-treasurer.

Montgomery—School, Water-works and Sewerage System.—City will vote May 9 on the issuance of \$250,000 of bonds, \$100,000 to be used for school purposes, \$200,000 for extending water-works, \$50,000 for extension of sewerage system. Address The Mayor.

Talladega—Water-power Developments.—The Talladega Company has let contract to J. J. Morris of the Morris Manufacturing Co., Morrisville, Ala., for construction of its dam lately reported, to develop from 2500 to 3000 horse-power. This power is to be transmitted by electricity.

Talladega—Textile Mills.—In connection with the power developments of the Talladega Company it is proposed to build a \$50,000 knitting mill, and Boston manufacturers are reported as contemplating a 10,000-spindle and 300-loom mill also. Possibly the Talladega Company can give information.

Talladega—Chemical Works.—Planters' Chemical Co. has been incorporated, with \$100,000 capital. It has purchased 300 acres of land on which to erect the following buildings: 150x265 feet, 82x216 feet, 40x60 feet, with detached boiler and engine house 30x10 feet. Plant will have a yearly capacity of 20,000 tons of acid phosphate and ammoniated guano. R. W. Henderson is president; G. A. Mattison, vice-president; H. O. Dumas, secretary-treasurer, and S. C. Oliver, manager.

ARKANSAS.

Camden—Telephone Company.—Incorporated: Ouachita Telephone Co., with \$25,000 capital. M. A. Jay is president; H. P. Smead, vice-president, and W. P. Ritchie, secretary-treasurer.

Charleston—Improvement Company.—Charleston Improvement Co. has incorporated, with \$4000 capital. T. A. Pettigrew is president; R. M. Southard, vice-president; D. W. Bryan, secretary, and J. S. Smith, treasurer.

Fort Smith—Zinc Mines.—Marble City Mining Co. has been organized with \$120,000 capital. C. E. Stokes is president; W. H. Robbins, vice-president; W. O. Caldwell, secretary, and F. F. Stevens, treasurer. Com-

pany has begun the development of zinc mines.

Fort Smith—Oil and Mining Company.—Twin Mounds Oil & Mining Co. has incorporated, with \$250,000 capital. George A. Waters is president; James B. McDonough, vice-president, and St. Cloud Cooper, secretary-treasurer.

Little Rock—Woodworking Plant.—It is reported that Judge John N. Van Deman, representing Michigan parties, is investigating with a view to establishing \$300,000 woodworking plant. George R. Brown, secretary Board of Trade, can give information.

Little Rock—Manufacturing.—Thos. Fordyce Manufacturing Co. has increased capital from \$100,000 to \$150,000.

Stephens—Cannery.—Stephens Canning Co. has been organized, with \$2000 capital, for conducting canning factory.

Yocum—Cannery.—Yocum Canning Co. has been incorporated with \$3000 capital. G. W. H. Ownbey is president; G. W. O'Neal, vice-president, and J. L. Rhodes, secretary-treasurer.

FLORIDA.

Arcadia—Street Improvements and Water-works.—City will issue \$5000 of bonds for street improvements. The issuance of \$13,000 bonds for water-works was defeated. Address The Mayor.

Eagle Lake—Live-stock, etc.—Feagin Live-Stock & Sugar Co. has been incorporated, with \$25,000 capital, by L. O. Feagin, M. O. Feagin and M. L. Feagin, to cultivate fruit trees, sugar-cane, rice, to build and operate refineries and factories, to operate saw-mills, etc.

Lake Helen—Box and Crate Factory.—The E. W. Bond Company and associates are enlarging warehouse, and will increase the capacity of crate and box factory.

Ocala—Water-power-Electric Plant.—W. N. Camp has submitted a proposition to the city council for the purchase of the municipal electric-light plant. If proposition is accepted, Mr. Camp will utilize the waters of the Withlacoochee river for furnishing the city with light and power. It is reported that at least 1000 horse-power will be furnished.

Osteen—Brick Works.—E. W. Bond Company and associates of Lake Helen, Fla., have purchased 2000 acres of land, and will erect plant for manufacturing bricks from sand and lime.

Pensacola—Lumber Mill.—Incorporated: Saunders Mill Co., with \$50,000 capital, to manufacture and deal in lumber, by J. R. Saunders, G. E. Weeks and W. C. Mackey.

St. Petersburg—Telephone System.—West Coast Telephone Co. has been incorporated, with \$10,000 capital, to construct, install, maintain and operate local telephone exchanges in St. Petersburg, Clearwater and Tarpon Springs; incorporators, John D. Darry, Horace B. Webster, Amos P. Avery and associates.

Tampa—Cigar Factory.—J. K. Parrish, W. T. Jamieson, Thomas B. Parker and others have incorporated the Reina Cigar Co., with \$10,000 capital, to manufacture and sell cigars, cigarettes and tobacco.

Tampa—Cigar Factory.—A. Santaella & Co. will rebuild cigar factory recently burned at a loss of \$125,000.

Wewahatcha—Gin.—Wewahatcha Gin Co. has been incorporated, with \$25,000 capital. J. T. McNeill is president; J. R. Hollinger, manager, and A. P. Higgins, secretary.

GEORGIA.

Adel—Planing Mill.—Adel Planing Mill Co. has been organized by Messrs. Baskin, May and Woodall.

Camilla—Cottonseed-oil Mill, Cotton Gin and Grist Mill.—Mitchell County Fertilizer Co. has increased capital from \$35,000 to \$50,000; will double the capacity of its oil mill from 20 to 40 tons, erect ice plant and \$2000 grist mill.

Cuthbert—Fertilizer Plant and Oil Mill.—Weaver & Co., cotton ginners, will build, as reported last week, a fertilizer plant and cottonseed-oil mill. Details have not been fully determined.

Dawson—Oil Mill.—The \$25,000 company reported last week as being organized will be known as the Farmers' Oil Co., and will erect a 20-ton plant. H. A. Petty is secretary.

Eatonton—Cotton Mill.—Floyd & Co., recently reported as having purchased the Eatonton Electric Co. and the Eatonton Electric Cotton Mill, has erected building 100x146 feet, and will install additional machinery, to include 1500 spindles and 112 looms. The equipment will be electrically driven, and water-power to generate same is now being developed.

Columbus—City Improvements.—City will

vote July 8 on the issuance of \$40,000 of improvement bonds. Address The Mayor.

Hazlehurst—Electric-light Plant and Water-works.—It is reported that a company is being organized for the construction of electric-light plant and water-works. Hazlehurst Manufacturing Co. can probably give information.

Moultrie—Cooperage.—Colquitt County Cooperage Co., manufacturing spirits-of-turpentine barrels, has let contract for erection of plant, 40x120 feet, to replace structure recently burned at a loss of \$6000; A. N. Davis, architect. (This item was reported last week as the Moultrie Cooperage Co.)

Rossville—Box Factory.—Richmond Hosiery Mills is erecting addition to be equipped for manufacturing paper boxes; building to be three stories, of brick, and cost \$10,000.

Sulphur Springs—Saw-mills.—J. T. Broadnax contemplates erecting two saw-mills.

Waycross—Cotton Chopper.—James H. Gillon and A. R. Johnson will establish plant for the manufacture of the Georgia cotton chopper.

Wrens—Oil Mill.—McNair-Young Company is correct title of company reported last week. It will invest \$20,000 for erection and equipment of cottonseed-oil mill to have daily capacity of 20 tons. Machinery has been ordered.

KENTUCKY.

Central City—Electric-light Plant.—City contemplates erecting electric-light plant; C. H. Blandford, city clerk.

Dawson Springs—Drug Company.—Dawson Pharmaceutical Co. has been incorporated, with \$50,000 capital, to manufacture and sell pharmaceutical preparations and deal in crude medicines, by W. P. Scott, W. G. Dyens, W. A. Berry and W. B. Smith.

Henderson—Rolling Mill.—A. Walter & Co. have purchased at \$7500 the plant of the Anchor Rolling Mill.

Louisville—Foundry.—F. A. Clegg, Henry Weilage, George Mathews and Otto Krause have organized as F. A. Clegg & Co., with \$25,000 capital, to manufacture steam heaters and ventilators.

Louisville—Bottling Plant and Warehouse. Bernheim Bros. will erect \$10,000 bottling plant and \$30,000 warehouse after plans by Clark & Loomis, Louisville, Ky.; capacity of warehouse, 10,000 barrels.

Madisonville—Coal Mines.—Royal Coal Co., recently reported incorporated with \$40,000 capital, is sinking shaft at its mines.

Madisonville—Water-works.—City has accepted the plans of Geo. C. Morgan of Chicago, Ill., for the proposed water-works system recently reported. The franchise will be offered publicly on May 2. Address The Mayor.

Robard—Coal Mines.—O. W. Rash, M. V. Denton and others have purchased the rights to 8000 acres of coal lands and will open coal mines at once.

LOUISIANA.

Jennings—Hardware.—Morse Hardware Co. has been incorporated with \$100,000 capital. Lucius L. Morse is president; Frank E. Morse, vice-president; Bertha E. Morse, secretary, and Walter D. Morse, treasurer.

New Orleans—Foundry.—Chartered: Bedell Structural Steel & Foundry Co., with \$100,000 capital, to operate foundry; Charles Bedell, president; William T. Coats, vice-president, and J. A. Littlefield, treasurer.

New Orleans—Electrotyping, Engraving, etc.—New Orleans Electrotype Co., Ltd., has been incorporated to manufacture and deal in electrotypes, engravings, etc., with \$10,000 capital. Andrew Vidak is president; Joseph Steckler, vice-president, and R. J. Slattery, secretary.

Rayville—Hardwood Mill.—Himmelberger-Harrison Lumber Co. will erect double-band hardwood mill for the development of 25,000 acres of hardwood timber land. Company also contemplates erecting handle, spoke and barrel factory.

St. Bernard—Timber Lands.—St. Bernard Cypress Co., Ltd., previously organized, estimates that over 100,000,000 feet of cypress is contained in the timber lands purchased recently at \$250,000. A Western furniture company is negotiating for the purchase of the timber, intending to erect saw-mills, establish factories, etc. If this deal is not concluded the St. Bernard Company will erect saw-mills and develop the property. Charles Godchaux of New Orleans is general manager.

Thibodaux—Grocery.—Percy Grocery Co. has been organized, with E. U. Morvant, president; Chas. Mire, vice-president, and P. R. Percy, manager; capital \$30,000. Company will erect building.

Washington—Saw and Planing Mill.—E. Thistlewait & Co. of Indiana have purchased

from J. J. Thompson and Dr. R. L. Walker 5000 acres of hardwood timber land at \$50,000. Saw and planing mill will be erected.

MARYLAND.

Annapolis—Brewery.—Annapolis Ice Manufacturing Co., Robt. J. Berryman, president, will erect brewery in connection with ice plant, to have a capacity of 25,000 barrels per year.*

Havre de Grace—Sewerage System.—Town will vote May 2 on the issuance of \$20,000 of bonds for the construction of sewerage system. Address Town Clerk.

Hyattsville—Sewerage System.—Town has voted affirmatively the issuance of \$30,000 of bonds for the construction of sewerage system. Address Town Clerk.

Midland—Mercantile.—J. H. Marshall Co. has been incorporated, with \$20,000 capital, by J. H. Marshall, William McFarlane, Garvin F. Morton and others.

Williamsport—Cannery.—R. H. Pollock Canning Co., Baltimore, Md., has acquired site on which to erect \$30,000 canning factory.

MISSISSIPPI.

Brookhaven—Saw-mills.—B. E. Brister Saw-Mill Co. has been organized, with \$1,000,000 capital.

Columbus—Knitting Mill.—George W. Kavanaugh Manufacturing Co. of Cohoes, N. Y., will establish the knitting mill recently reported as proposed. Plant will manufacture fleece-lined underwear. A modern building will be erected; about \$150,000 will be invested.

Dayton—Lumber Mill.—Foster Creek Lumber Co. (reported last week in error under Liberty) has increased capital from \$125,000 to \$200,000, remodeled mill, and has daily capacity of 60,000 feet of cut pine.

Edwards—Artesian Well.—City has voted the issuance of \$4000 of bonds for boring artesian well. Address The Mayor.

Greenville—Levee Construction.—Mississippi levee board has awarded contract for 3,000,000 cubic yards of levee work in the upper part of the district to M. J. Roach & Co., Memphis, Tenn., at \$600,000.

Hattiesburg—Electric-light Plant.—City has authorized the issuance of \$60,000 of bonds for electric-light plant. Address The Mayor.

Hattiesburg—Furniture Company.—Progress Furniture Co. has been incorporated with \$2000 capital.

Jackson—Water-works.—City will vote July 2 on the issuance of \$250,000 of bonds for proposed water-works. Address The Mayor.

Laurel—Sewerage System.—City has not awarded contract to the Iowa Engineering Co., mentioned last week, for constructing the sewerage system. The facts are that the Iowa Engineering Co., offices at 410 Weston Building, Clinton, Iowa, will revise plans and superintend the construction work. About six or seven miles of pipe sewers will be built. The appropriation for same is \$20,000. Arthur J. Cox is engineer in charge.

Lumberton—Turpentine Plant.—Lumberton Naval Stores Co. is about to begin erection of its proposed turpentine plant. Address company at Hattiesburg, Miss.*

Magnolia—Ice Plant and Beverage Factory.—Magnolia Manufacturing Co., reported last week as to enlarge plant, will erect building 74x50 feet and equip for manufacturing ice and carbonated drinks; Xavier A. Kramer, engineer in charge.

Meridian—Oil Wells.—Meridian Oil Co. has been organized, with \$12,000 capital, to sell the output of oil well at Batson, Texas; output 4000 barrels daily. W. D. Cameron is president; A. D. McRaven, secretary; H. Q. Meyer, treasurer, and C. F. Woods, manager.

Mississippi—Bridge.—Denny & Co. will build railroad drawbridge across Escatawpa river, for which surveys are now being made.

Osyka—Electric-light Plant and Water-works.—Town has voted affirmatively the issuance of \$15,000 of bonds for constructing electric-light plant and water-works. Address Town Clerk.

Oxford—Brick and Tile Works.—Oxford Brick & Tile Co. has been incorporated, with capital of \$10,000, and will establish plant for manufacturing 400,000 red pressed bricks per month. All machinery has been purchased.

Oxford—Ice Plant.—Oxford Oil Mill Co. will increase capital for the purpose of building a 10-ton ice plant.

Sandersville—Hoop Factory.—Incorporated: Elberta Hoop Co. with \$10,000 capital.

West Point—Sewerage System.—City contemplates construction of sewerage system. Address The Mayor.

MISSOURI.

Doniphan—Electric-light Plant.—City has granted franchise for construction of electric-light plant; D. C. Cunningham, mayor.

Jamestown—Mercantile.—Farmers' Mercantile & Manufacturing Co. has been incorporated by W. H. Williamson, Louis Koch, M. K. Johnson and others; capital \$9000.

Kansas City—Lumber.—Dierks & Sons Lumber Co. has been incorporated with \$109,000 capital; incorporators, Hans Dierks, Harry Dierks and Herbert Dierks.

Kansas City—Grain and Export Company. Missouri Valley Grain & Export Co. has been incorporated with \$509,000 capital; incorporators, William Burke, W. H. Harroun, W. H. Stuede and others.

Kansas City—Heating Company.—G. G. Brinton, W. F. Cushman, D. B. Holmes and others have incorporated the Kansas City Instantaneous Heat Co. with \$25,000 capital.

Sleeper—Stone Company.—Clark Stone Co. has been incorporated, with \$5000 capital, by L. E. Morris, H. B. Clark, H. W. Clark and others.

St. Joseph—Milling.—Incorporated: Davis Milling Co., with \$100,000 capital, by Milton Tootle, C. G. Lacy, John J. Tootle and others.

St. Louis—Mining and Manufacturing.—Union Fuel Co. has been incorporated, with \$100,000 capital, for mining and manufacturing, by O. L. Garrison and W. S. Haddaway.

St. Louis—Grocery.—Yates Grocer Co. has been incorporated, with \$75,000 capital, by J. A. Yates, Edward Langan and E. A. Lindemann.

St. Louis—Drugs.—Adolph Pfeiffer, Louis Mayer and Max Lippmann have incorporated the Lynn Chemical Co. to manufacture and deal in medicinal preparations; capital \$6000.

St. Louis—Bottling Plant.—E. J. Brooks, F. J. Brooks and associates have incorporated the Celery Cola Co., with \$12,000 capital, to manufacture and sell celery cola, syrup and bottled goods.

St. Louis—Realty Company.—Clearfield Realty & Investment Co. has been incorporated with \$30,000 capital; incorporators, Con P. Curran, Eugene P. O'Fallon and Richard T. Giblin.

St. Louis—Publishing.—Incorporated: Forest City Publishing Co., \$10,000 capital, to conduct printing and publishing business, by Frank A. Hill, Thomas H. McFearnon, Robert F. Grady and others.

St. Louis—Amusement Company.—John J. Schlange, Harrison I. Drummond, James T. Drummond and others have incorporated the Carle Amusement Co. with \$20,000 capital.

St. Louis—Transfer Company.—West Side Terminal Warehouse Co. has been incorporated, with \$100,000 capital, to do a general hauling and transfer business, by Walter R. Ver Steeg, George Nicol and Orville E. Kinne.

St. Louis—Realty Company.—Ver Steeg Realty Co. has been incorporated with \$100,000 capital; incorporators, W. B. Ver Steeg and F. B. Ver Steeg.

St. Louis—Engine and Machine Shops.—Harrison Machine Works will erect engine and machine works at a cost of \$50,000.

St. Louis—Real Estate.—William R. Madern, William A. Brenner and S. R. Brewer have incorporated the Thielen Realty Co., with \$40,000 capital.

St. Louis—Power-house and Car Shops.—St. Louis & Suburban Railway will expend \$50,000 in enlarging and improving power-house and car shops; Chas. H. Ledlie, engineer, Rialto Building.

St. Louis—Construction and Amusement Company.—Adolph Jahn, Meade C. Dobson and William Keane have incorporated the Jahn Construction Co., with \$30,000 capital.

St. Louis—Paving.—Board of public improvements has let contract to the Granite Bituminous Paving Co. at \$169,429.30 for paving Lindell boulevard between Grand avenue and the King's highway.

Versailles—Power Plant.—City is having plans prepared by W. K. Palmer, C. E. Lyceum Building, Kansas City, Mo., for power plant to be installed at electric-lighting plant.

NORTH CAROLINA.

Asheville—Cotton Mill.—W. E. Lucas of Laurens, S. C.; J. E. Shirre of Greenville, S. C., and associates have made a proposition, which will be accepted, for the establishment of a 30,000-spindle and 1000-loom mill for manufacturing fine yarns and print cloths. They plan to utilize the power furnished by the water-electrical developments of the Weaver Power Co. The plant will be capitalized at \$450,000 or more.

Asheville—Glass Works.—George A. H. Shideler, H. F. Reynolds, R. E. Breed and B.

F. Burk, all of Marion, Ind., contemplate establishing plant for the manufacture of glass.

Burgaw—Electric-light Plant.—It is reported that J. W. Reilly of J. W. Reilly & Son, Wilmington, N. C., is investigating with a view to establishing electric-light plant.

Burlington—Brick Works.—Midway Brick Co. has been incorporated, with \$15,000 capital, for the establishment of brick plant, by L. Banks Williams, J. A. Bryan and Johnson Homewood.

Concord—Brick Plant.—Concord Brick & Building Co., reported last week as organized, will erect plant with a capacity of 25,000 brick per day. R. O. S. Miller is engineer in charge.

Elizabeth City—Telegraph.—James P. Copeland is organizing the Wireless Telegraph Co., with \$20,000 capital, for operating a system of wireless telegraphy between New Bern, Hatteras, Roanoke Island, Elizabeth City and Norfolk, N. C.

Gladstone—Mining.—North Carolina Mining & Milling Co. of Cleveland, Ohio, has purchased mining property, and will at once begin operations.

Laurinburg—Cotton Mill.—Dickson Cotton Mills will install 1920 spindles additional, and has awarded the contracts. Possibly another installation of 4000 spindles will be decided later on.

Lowell—Cotton Mill.—Spencer Mills contemplates building an additional mill to have 10,000 spindles, but a final decision has not been reached.

Mooreville—Electric-light Plant.—Reports state that B. A. Trautman is endeavoring to organize company for the establishment of electric-light plant.

New Bern—Bottling Plant.—Hutaff Bros., proprietors of Coca-Cola Manufacturing Co., Wilmington, N. C., will establish branch plant to manufacture and bottle syrup. About \$5000 will be invested.

North Carolina—Saw-mill.—J. H. Bryan, representing the Bryan Lumber Co., of Bristol, Va.-Tenn., has purchased 4500 acres of timber land and will at once erect three saw-mills for its development.

Rich Square—Mercantile.—Peele, Parker & Brown Company has been incorporated, with \$15,000 capital; incorporators, T. H. Peele, J. P. Parker and W. D. Brown.

Roxboro—Cotton Mill.—Roxboro Cotton Mills will erect additional building and install 3192 spinning spindles and twistors.

Salisbury—Distillery.—J. W. Summers is erecting distillery with a capacity of 150 gallons daily.

Sanford—Lumber.—W. B. Moffitt, S. P. Hatch and others have incorporated the Builders' Lumber Co. with \$50,000 capital.

Selma—Cotton Mill.—The mill company reported last week has organized with N. E. Edgerton, president; M. C. Winston, vice-president, and R. B. Whitely, manager. Equipment will be 5000 spindles, 250-horsepower engine and boilers to suit, etc.*

Spencer—Clothing and Shoe Company.—Chartered: Spencer Clothing & Shoe Co., with an authorized capital of \$20,000; incorporators, S. F. Rogers, W. B. Smoot, W. T. Ramsey and others.

Stanley—Brick Works.—Stanley Brick Co. has been organized, with \$2000 capital, by T. C. Quickle, M. P. Peterson and R. E. Carpenter, for manufacturing light buff brick; plant to have a daily capacity of 30,000 bricks. Mr. Quickle and associates were mentioned last week as having purchased the plant of Jacob Jenkins.

SOUTH CAROLINA.

Bethune—Mercantile.—Chartered: Stevens Mercantile Co., with \$10,000 capital. John T. Stevens is president; LeRoy S. Davidson, vice-president, and B. M. Bruce, secretary.

Clinton—Knitting Mill.—P. S. Bailey and W. H. Shands will organize company, with capital of \$12,000, to establish knitting mill.

Columbia—Contracting.—Ong-Trowbridge Company has been incorporated, with \$10,000 capital, for a general contracting and building business; incorporators, J. F. Ong, W. E. Trowbridge and W. Boyd Evans.

Conway—Mercantile, Real Estate.—G. Fred Stalvey and S. A. Causey have incorporated the Horry Joint Stock Co., with \$15,000 capital.

Dillon—Cottonseed-oil Mill.—Dillon Cotton Oil Co. has purchased additional site 30x30 feet, and will rebuild oil mill burned at a loss of \$10,000. Capacity of plant will be doubled. W. J. Smith, Sumter, S. C., is superintendent of construction.

Edinburgh—Cotton Gln.—Incorporated: Edinburgh Ginning Co., with \$5000 capital, by W. E. Dargan and Robert Keith Dargan.

Fairfax—Cottonseed-oil Mill.—F. M. Young, J. F. Lightsey, W. E. Hardin, J. W. Jennings and associates have incorporated the Fairfax Cotton Oil Co., with \$20,000 capital, to build cottonseed-oil mill.

Fort Mill—Cotton Mill.—Millfort Mill Co. will build an extension 100x60 feet, two stories high, and add 5000 spindles and 150 looms, together with the necessary complementary machinery; about \$100,000 to be expended.

Graniteville—Telephone Company.—Chartered: Graniteville Telephone Co., with \$2500 capital. W. A. Giles is president, and C. B. Willis, secretary.

Marion—Contracting.—Incorporated: Philadelphia Construction Co., with \$5000 capital, by T. C. McNeely of Marion and W. H. Edwards, W. H. Fitts and Jesse Carter of Sanford, N. C.

Pomario—Cottonseed-oil Mill.—It is reported that a cottonseed-oil mill will be erected. J. W. Summer is interested.

Westminster—Water-power-Electric Plant. John C. Rankin of Lowell, N. C.; J. S. and W. A. Mauney and D. M. Baker of Kings Mountain, N. C., have secured an option on 3000 acres of land adjoining Chauga creek. Water-power will be developed and plant erected for furnishing light and power to cotton mills.

Summerville—Brick Works.—A. W. and J. W. Taylor have incorporated the Summerville Brick Co. to manufacture bricks; capital \$25,000.

TENNESSEE.

Brownsville—Chair Factory.—It is proposed to establish a chair factory, daily output to be about 25 dozen. J. W. Byrn can give information.*

Chattanooga—Printing.—R. J. and D. B. Caslin, J. J. Phillips, A. C. Lieb and W. R. Moyers have incorporated the Hamilton Printing Co., with \$2000 capital.

Chattanooga—Spoke Factory.—H. W. Baggs and Pennsylvania capitalists will organize the Lios Spoke Works, with \$10,000 capital, to manufacture spokes for vehicles. Plant will have a capacity of from 5000 to 10,000 spokes per day.

Chattanooga—Woodworking Factory.—Brownlee Lumber Co. of Meridian, Miss., previously reported as to establish factory for the manufacture of telegraph and telephone crossarms, has secured site and will have plans prepared at once for the erection of plant.

Clarksville—Button Factory. Fertilizer Works, etc.—M. A. Stratton, H. W. Ritter, F. J. Runyon, C. C. Gerhart and A. R. Gholsen have incorporated the Clarksville Button Works to manufacture buttons, grind and crush shells for chicken feed, fertilizer, etc.; capital \$5,000. Mr. Stratton can be addressed at 116 Franklin street.

Columbia—Phosphate Mines.—Chartered: Big Swan Phosphate Co., with \$60,000 capital, for the development of property in Maury and Lewis counties; incorporators, Joan W. Fry, H. F. Alexander, S. C. Long, Geo. W. Killebrew and Frank Wheeler.

Cookeville—Electric-light Plant.—Gainesboro Telephone Co. contemplates installing electric-light plant.

Crossville—Woodworking Plant.—It is reported that A. M. McClain of Ridgway, Pa., contemplates organizing company for the establishment of woodworking plant.

Elora—Hoop and Stave Mills.—It is reported that Ohio parties will establish a chain of hoop and stave mills in this vicinity. Dr. G. A. Light, vice-president Elora Stave Co., can give information.

Jonesboro—Zinc Mines.—Tennessee Button Co., Rome, Ga., has discovered zinc deposits on the property of N. A. Patterson near Jonesboro; property has been leased and will be developed.

Knoxville—Wire-screen Factory.—H. C. Helm, Jas. H. McCallum, S. M. Johnston and others have incorporated the Helm-McCallum Manufacturing Co., with \$10,000 capital, to manufacture wire window and door screens.

Knoxville—Veneer Factory.—Philadelphia Veneer & Lumber Co., recently incorporated with \$100,000 capital, is erecting plant for the manufacture of strawberry boxes and all kinds of veneering work.

Morristown—Ice and Cold-storage.—Morristown Produce & Ice Co., recently reported incorporated with \$10,000 capital, has purchased and will operate the cold-storage and ice plant of Carter, Grubb & Co. G. W. Ives is general manager.

Memphis—Soap Factory.—Mineral Oil Soap Co., reported organized, etc., last week with \$100,000 capital, will occupy building two stories high, 50x75 feet, installing machinery for daily output of 50 tons of toilet

and laundry soaps; offices at 180 Central alley.*

Memphis—Steam-heating Plant.—Memphis Steam Heating Co., reported incorporated last month with \$10,000 capital, has been granted franchise by the city for heating the public buildings, etc., for 35 years. Pipes will be laid for carrying the heat through the streets.

Nashville—Coal Mines.—W. H. Workman, Levi C. Workman, D. H. Thomas and associates have incorporated the Flat Branch Coal & Coke Co., with \$15,000 capital, to mine coal.

Nashville—Hard-wall finish.—American Hard Wall Finish Co. has been incorporated, with \$10,000 capital; incorporators, H. G. McCulla, John W. Sneed, Ben W. Ross and others.

Nashville—Food Company.—Chartered: Southern Cereal Mill Co., with \$25,000 capital, by H. W. Buttorff, John D. Anderson, J. H. McPhail and others, to succeed the Southern Flake Food Co., manufacturing Southern Flakes, a breakfast food.

Springfield—Bridge.—Robertson county will build a bridge across Sulphur Fork creek. J. W. M. Gooch, J. M. Robertson and E. S. Eckles have been appointed building committee.

TEXAS.

Austin—Bridge and Railroad Terminal Improvements.—International & Great Northern Railroad is having plans prepared for the construction of steel bridge across the Colorado river. Company also contemplates making extensive improvements to terminals; J. D. Trammell, chief engineer, Palestine, Texas.

Beaumont—Stone and Gravel Quarry.—Chartered: Texas Stone Co., for quarrying stone, gravel, etc., by O. M. Stone, G. J. Tullis, Beaumont; P. J. L. Megathlin, Sabine Pass, Texas, and others; capital \$50,000.

Bonham—Cattle Company.—Halsell-Arlidge Cattle Co. has been organized, with \$100,000 capital, by Hugh Halsell, Zac Smith, John F. Arledge and James S. Arledge.

Brownsville—Laundry.—Lon C. Hill will establish laundry. Machinery has been ordered.

Comanche—Cottonseed-oil Mill.—William Reese, W. H. Montgomery and Fred Obelthier have organized company, with \$40,000 capital, for the erection of cottonseed-oil mill. Mr. Obelthier is general manager.

Dallas—Cotton-gin Works.—Murray Company, recently reported to make extensive improvements to its plant, including the erection of new buildings, has increased capital from \$450,000 to \$600,000.

El Paso—Tannery.—H. T. Case in investigating with a view to establishing \$30,000 tannery. Mr. Case also proposes cultivating canebrake root, containing tannic acid, in connection with the tannery.

Fort Worth—Electric-light Plant.—Sam Rosen has applied for franchise to erect electric-light plant in North Fort Worth.

Houston—Investment Company.—Fairview Investment Co. has been incorporated with \$30,000 capital; incorporators, N. L. Mills, Sterling Myer, Bryan Heard, W. S. Hunt and J. M. Moore.

Killeen—Oil Wells, Mineral Lands, etc.—Incorporated: Montgomery County Oil & Development Co., with \$10,000 capital, to prospect for oil and minerals, by W. A. Craddock, F. M. Todd, O. B. Hoover and others.

Krum—Flour Mill.—Krum Mill & Elevator Co., reported last week under Denton, and to increase capital from \$20,000 to \$40,000, has let contract for the erection of 250-barrel flour mill and 50,000-bushel steel tank; about \$16,000 will be invested. J. A. Harrington is engineer in charge.

McCoy—Cannery.—Canning factory reported last week will be erected by W. F. Fry, Willis Point, Texas, and will have a daily capacity of 3000 cans.

Nederland—Trading Company.—E. F. Moore, L. F. Gregg and F. W. Bridgeman have incorporated the Gulf Trading Co., with \$15,000 capital.

Paris—Handle Factory.—Johnson Handle Works, W. H. Johnson, manager, Lock Box 712, Texarkana, Texas, will establish plant for manufacturing spade and shovel handles from ash; output to be 150 cars annually.

Ratcliff—Drug Company.—Charles M. Hammer, Ratcliff; W. P. Barrow, Rockland, Texas, and S. B. Barron, Rusk, Texas, have incorporated the Ratcliff Drug Co., with \$2000 capital.

Rusk—Electric-light Plant.—Rusk Manufacturing Co. will install electric-light plant.

San Antonio—Oil Wells, etc.—Santa Anna Industrial Co. has been incorporated, with \$250,000 capital, to prospect for oil and minerals, by T. D. Cobbs, F. A. Piper, R. L. Ball, H. L. Benson and others.

San Antonio—Wallpaper, Paints, etc.—Alamo Paint & Wallpaper Co. has been incorporated, with \$12,000 capital, to deal in paints, wallpaper, mantels, etc.; incorporators, George C. Saur, Otto P. Ankerson, Aug. De Zavalla and others.

Sherman—Cottonseed-oil Mill.—Sherman Cotton Oil Co. has been incorporated, with \$3,000,000 capital, by W. P. Brents, M. B. Pitts, C. N. Roberts of Sherman, J. Lobit of Galveston, Texas, and E. P. Bomar of Gainesville, Texas. Company has purchased and will operate the oil mill of the Sherman Oil & Cotton Co.

Sherman—Light, Heat and Power.—Chartered: Sherman Light & Power Co., with \$100,000 capital, by W. P. Brents, M. B. Pitts, C. N. Roberts of Sherman, J. Lobit, Galveston, Texas, and E. P. Bomar, Gainesville, Texas.

Sour Lake—Real Estate.—Chartered: Brasher Townsite Co., with \$100,000 capital, by J. M. Carpenter, E. E. Carpenter, Sour Lake; G. W. Meeker, F. H. Votaw and L. Struthoff of Beaumont, Texas.

Sour Lake—Oil Factory.—E. D. Green, box 22, contemplates establishing plant to manufacture lubricating oils and market same in sealed cans.*

Tyler—Educational.—Noah Adair, H. E. Hyne, E. A. Glenn and others have incorporated the Tyler Commercial College, with \$10,000 capital.

Waxahachie—Water-works Improvement. T. F. Davenport is engineer in charge of the water-works improvement reported last week. Another well will be bored and three or four miles of additional water pipe laid; W. J. F. Ross, mayor.

VIRGINIA.

Crab Neck—Saw-mill.—Crab Neck Lumber Co., reported last week as organized with \$10,000 capital, will erect plant 60x150 feet for manufacturing rough and dressed lumber. Dry-kiln will have a capacity of 25,000 feet every 10 hours.

Emporia—Water-works Improvement.—Town will advertise for bids for improving water-works system or sell the municipal franchise; John R. Griffard, town clerk.

Emporia—Oil and Gas Wells.—John H. Dodson and a Mr. Patterson of Pennsylvania are prospecting in Greensville county with a view to organizing company to drill for oil and gas.

Madison—Copper Company.—Blue Ridge Copper Co. has been incorporated with a capital of from \$200,000 to \$500,000. Jacob Lauth is president.

Martinsville—Electric-light Plant.—Town has optioned water-power near Martinsville and contemplates erection of plant for developing to furnish electricity for lighting. Address Town Clerk.

Middlebrook—Flying Machine.—Thomas J. Whalen claims to have perfected a flying machine, and proposes organizing company to build such machines.

Norton—Steam Laundry.—Porter & Morley will establish steam laundry, erecting a building, for which plans are being prepared now.

Norton—Ice Plant.—L. O. Pettit and associates have let contract for erection of ice plant of 20 tons capacity daily.

Norton—Sewerage System.—City will vote May 12 on issuing \$25,000 in bonds for construction of sewerage system and erection of town building. Address The Mayor.

Roanoke—Exploration Company.—Southern Exploration Co. has been organized, with \$200,000 capital, to promote the industrial development of Virginia and the South. Edward W. Robertson is president; Horace M. Engle, vice-president and manager; William C. Stephenson, secretary, and Edward L. Stone, treasurer.

Staunton—Wood Framing Company.—Staunton Wood Framing Co. has been incorporated, with \$15,000 capital; Wm. H. Hyer (president).

Suffolk—Peanut Factory.—It is reported that another peanut factory will be erected on Pinner street. J. D. Woodley can probably give information.

Suffolk—Brick and Tile Works.—West End Brick Co. has been incorporated, with \$25,000 capital, for manufacturing brick, tiling and other clay products. Thomas H. Birdsong of Courtland, Va., is president; Henry L. Land, Suffolk, vice-president; Chas. Parker, Franklin, Va., general manager, and John C. Holladay, Suffolk, secretary-treasurer.

West Point—Electric-light Plant.—Reports state that an electric-light plant is proposed. Benjamin Strong of Ohio represents the projectors, and is in West Point to perfect arrangements.

West Point—Canning Factory.—J. W. Marshall will not establish crab-canning plant, as reported last week, but will simply enlarge an established plant, installing new machinery at a cost of \$1000; new building to be erected will be two stories, frame, 300x60 feet. Mr. Marshall also contemplates installing machinery for crushing oyster shells and converting waste from crabs into fertilizer.*

WEST VIRGINIA.

Adamston—Glass Factory.—Clarksburg Co-operative Glass Manufacturing Co. will build an addition to its plant.

Elkins—Building Company.—Elkins Building Co. has been incorporated, with \$10,000 capital, for general contracting and building; incorporators, W. A. Bailey, C. D. Newton, D. R. Martin and others.

Elkins—Grocery.—Chartered: Gulland-Clarke Company, with J. S. Gulland, president; E. D. Talbott, vice-president; N. I. Hall, secretary; H. M. P. Clarke, treasurer, and William Gulland, general manager. Company will erect brick building.

Glendale—Improvement Company.—Glendale Improvement Co. has been incorporated, with \$100,000 capital, by C. E. Haddox, B. B. McMechen, W. D. Alexander, Friend Cox and J. E. Roberts. Company has acquired the holdings of the Glendale Land Co., consisting of about 200 lots, which will be divided off as building sites.

Ronceverte—Real Estate.—Meadow River Coal Co. has incorporated, with \$1000 capital; incorporators, Robert S. Gorham, West Newton, Mass.; Thomas N. Perkins, Westwood, Mass.; John Philip Hill, Boston, Mass., and associates.

Terra Alta—Glass-sand Mines.—Preston Glass Sand Co., recently reported incorporated with \$35,000 capital, has purchased 200 acres of glass-sand property, and will at once arrange for its development.

Thurmond—Coal Mining.—Edward Thomas, W. W. Thomas, H. P. Thomas and associates have incorporated the Newlyn coal Co. for mining coal; capital \$25,000.

INDIAN TERRITORY.

Schulter—Coal Mines.—Warden Coal Co. of Henrietta, I. T., has discovered a five-foot vein of coal and will develop the property.

Tishomingo—Gold Mines.—Tishomingo Gold Mining Co. of Tishomingo and Oklahoma City, O. T., has been incorporated, with \$1,000,000 capital; incorporators, Luther W. Gregg, James A. Orendorff of Tishomingo and Charles W. Peavey of Oklahoma City, O. T.

OKLAHOMA TERRITORY.

Deer Creek—Oil, Gas and Manufacturing. Ideal Oil, Gas & Manufacturing Co. of Deer Creek and Cherryville, Kan., has been incorporated, with \$250,000 capital, by F. J. Preston, J. G. Brenholt, Deer Creek; A. E. Greiman, W. H. Brown and A. M. Barker, Cherryville, Kan.

El Reno—Transfer and Storage Company. Incorporated: Engle Transfer & Storage Co., with \$5,000 capital, by H. S. Engle, J. E. Bonebrake, C. L. Engle and associates.

El Reno—Light and Power.—Union Light & Power Co. has been incorporated, with \$250,000 capital, by Henry T. Smith, Robert S. Trulock and Ernest E. Blake.

Enid—Water-works.—City has voted affirmatively the issuance of \$75,000 of bonds for construction of water-works. Address The Mayor.

Guthrie—Oil and Gas.—Carson Oil & Gas Co. of Guthrie and Red Fork, I. T., has been incorporated, with \$500,000 capital, by Frank Hindman, L. N. Beadles of Guthrie, Ursher Carson of Red Fork, I. T., and others.

Guthrie—Water, Gas, Oil and Mineral Company.—O. P. Cooper, Frank M. Rinehart, Frank J. Dolcater, W. S. Spencer and associates have incorporated the Mutual Water, Gas, Oil & Mineral Co., with \$500,000 capital, to operate in Oklahoma and Indian Territories.

Mangum—Grocery.—C. R. Garner, W. H. Beauchamp and Dan Mathewson have incorporated the Garner Beauchamp Grocery Co., with \$10,000 capital.

Noble—Hardware.—Incorporated: Noble Hardware & Lumber Co., with \$10,000 capital, by H. H. Everett, Madge Endicott and Isaac Graham.

Oklahoma City—Publishing.—Jas. A. Tobin and John Tobin of Oklahoma City and Thomas P. Tobin of Leadville, Col., have incorporated the News-Dispatch Publishing & Printing Co. with \$100,000 capital.

Oklahoma City—Laundry and Dormitory. George E. Hooper, Arkansas City, Kan., was the lowest bidder at \$16,880 for the erection of laundry and dormitory at the Chilocco Indian School.

Woodward—Construction Company.—B.

W. Key, J. W. McGee, E. S. Wiggins, J. J. Gerlach and associates have incorporated the Woodward Construction Co. with \$5000 capital.

Woodward—Mining, Irrigation, etc.—Black Mesa Smelting, Mining, Irrigation & Townsite Co. has incorporated with \$1,500,000 capital; incorporators, T. L. O'Bryan, T. H. Campbell, D. H. Patton, F. H. Morgan and others.

BURNED.

Carson, Va.—Hartley, Perkins & Co.'s saw-mill.

Clarksville, Texas.—J. M. Riddle's shingle and grist mill and blacksmith shop.

Clinton, Mo.—Clinton Pottery.

Greenfield, Ark.—Greenfield Lumber Co.'s heading factory and dry-kiln.

Greenville, Ky.—E. Rice's tobacco factory; loss \$20,000.

Memphis, Tenn.—Cole Manufacturing Co.'s plant.

Owingsville, Ky.—Paxton & Sanders' flour mill; loss \$4000.

Pineville, Ky.—A. J. Asher's stove mill; loss \$18,000.

Ruston, La.—Ruston Mill Co.'s planing mill.

Washington, D. C.—James E. Topham's trunk factory; building owned by Jacob Travers estate.

Welsh, La.—Welsh Public School; loss \$8000.

Wilmington, N. C.—Pittsburg Lumber Co.'s plant; loss \$100,000.

Yeomans, Ga.—John S. Jones' steam gin-nery.

BUILDING NOTES.

*Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery, Proposals and Supplies Wanted."

Agricultural College, Miss.—College Buildings.—Mississippi Agricultural and Mechanical College will consider on May 4 plans and specifications for engineering building to cost about \$30,000, and for barns to cost about \$5000. On same date will consider propositions for completing the dormitory, for which plans have been prepared; R. C. King, secretary.

Albemarle, N. C.—Store and Office Building.—Money & Asbury are having plans prepared by W. P. Rose of Raleigh, N. C., for store and office building.

Alpine, Texas—Bank Building.—First National Bank, C. A. Brown, president, will erect bank building.

Annapolis, Md.—Naval Academy Buildings.—Noel Construction Co., Baltimore, Md., was the lowest bidder at \$1,256,000 for constructing and equipping academic group of buildings at the United States Naval Academy.

Arcadia, Fla.—School Building.—City has voted the issuance of \$12,000 of bonds for erection of school building. Address The Mayor.

Asheville, N. C.—Building.—Dr. Paul Paquin has had plans prepared for enlarging the Halthenon Building.

Atlanta, Ga.—Flat Building.—Wilmer L. Moore is erecting four two-story flat houses to cost \$8000.

Batesville, Ark.—Public Building.—F. L. Stevenson Contract Co. of Dallas, Texas, has contract at \$56,275 for the erection of public building.

Birmingham, Ala.—Store Building.—R. W. Massey is having plans prepared by Wm. E. Spink, 812-813 Guarantee Building, for three-story store building 50x140 feet, to cost \$25,000.

Black Mountain, N. C.—Hotel.—Black Mountain Inn Co. has been incorporated, with \$15,000 capital, to conduct a hotel, by A. E. Stevens, C. L. Stevens, C. W. Munger and associates, all of New Berne, N. C.

Booneville, Miss.—Courthouse.—Prentiss county contemplates erecting \$50,000 courthouse. Address County Clerk.

Carlizzo Springs, Texas—School.—J. D. Speers, county judge of Dimmit county, will open bids May 2 for erecting schoolhouse in accordance with plans and specifications on file at office of county judge, also at office of Hudson & Hudson, Rooms 35-36, Kampmann Building. Usual rights reserved.

Charlotte, N. C.—Hotel.—Southern Real Estate, Loan & Trust Co. has purchased site at \$20,300, and will erect modern hotel.

Charlotte, N. C.—Masonic Temple.—Masonic Temple Association has purchased site at \$26,800 for the erection of temple.

Chattanooga, Tenn.—Church.—St. Elmo's Episcopal mission will erect \$5000 edifice at St. Elmo; Dr. F. W. Goodman, pastor.

Checotah, I. T.—School Building.—City will issue \$15,000 of bonds for the erection of school building. Address The Mayor.

Cheraw, S. C.—School Building.—City has voted the proposed issuance of \$12,000 of bonds for erection of brick school building, and bids on construction will be asked. Address The Mayor.

Columbia, S. C.—Statehouse Improvements.—C. C. Wilson is preparing plans for improvements to be made to Statehouse, including new roofing and installation of heating and lighting apparatus, for which \$5000 was recently appropriated.

Columbia, Tenn.—Courthouse.—Maury county has reduced appropriation from \$100,000 to \$55,000 for courthouse previously reported to be erected. Address County Clerk.

Coweta, I. T.—Bank Building.—Coweta State Bank is having plans prepared by Sudhoefer & Rue, Muskogee, I. T., for two-story bank building 50x50 feet; structure to be of press brick, stone, marble and granite, iron, steel and wirework beams, gravel roof, tile floor, and cost \$10,000.

Dallas, Texas—College.—S. Kiely & Bristol are preparing plans for building to be erected by the Metropolitan Business College, Prof. A. Ragland; structure to be 50x96 feet, and cost \$20,000.

Dallas, N. C.—County Home.—Gaston county will erect new county home; structure to be two stories, of brick. Bids will be called for at once. Address the County Clerk.

Farmington, Mo.—Church.—T. H. Glover has contract to erect \$9000 edifice for First M. E. Church, recently reported, after plans by Architect Whitlock; structure to be 66x74 feet; W. R. McCormack, pastor.

Fort Smith, Ark.—Hotel.—M. Duff of Fort Smith and J. B. Nunneley of Temple, Texas, will erect \$250,000 hotel.

Frederick, Md.—Hospital Addition.—An addition will be built to the Frederick City Hospital at a cost of from \$5000 to \$10,000.

Gallatin, Tenn.—School Building.—Trustees of the Summer Training School have accepted plans by C. K. Colley, Nashville, Tenn., for the erection of \$8000 school building; two stories, of pressed brick; Charles E. Hawkins, Murfreesboro, Tenn., principal.

Georgetown, Ky.—Residence.—Bids will be opened April 15 for erecting two-story brick and stone residence for Mrs. Judge Cantrill after plans by Martin Goertz, Lexington, Ky.; structure to have plate and art glass, gas and electric fixtures, and cost \$5000.

Grafton, W. Va.—Business Block.—F. W. Friedman of Friedman & Co. contemplates erecting business block.

Greenwood, Miss.—Store Building.—Samuel J. Stein has let contract for the erection of five store buildings. Gus Ray will erect three brick store buildings.

Hiddenite, N. C.—Hotel.—E. L. and W. L. Davis will erect hotel.

Hopkinsville, Ky.—Jail.—Fiscal Court has accepted plans by a St. Louis architect for the erection of Christian county's proposed \$20,000 jail building. Contract for erection will be let at once. Address County Clerk.

Houston Heights, Texas—School Building. School board has had plans prepared by Architect Dawson for a modern brick high-school building to cost \$12,000.

Houston, Texas—School Building.—School board has accepted plans and specifications by Ole J. Lorehn and let contract to Mr. Lorehn at \$41,038 for the erection of three-story annex to high school; upper floors to be connected by steel causeways; metal ceilings; to be lighted by electricity and gas and heated by steam.

Jacksonville, Fla.—Church.—Bethel Baptist Church will erect \$25,000 edifice of brick, frame and stone, 85x100 feet, with metal roof, after plans by M. H. Hubbard, Utica, N. Y. Address The Pastor.

Jacksonville, Fla.—Dwelling.—McClure & Holmes have prepared plans for \$10,000 residence to be erected by R. V. Covington; building to have steam heat, electric lights, etc.

La Grange, Ga.—Courthouse.—C. C. Totherow & Co., Birmingham, Ala., have contract at \$18,000 for erection of Troup county's courthouse, recently reported.

Laurel, Miss.—Building.—J. J. Cross, proprietor Star Restaurant, has let contract to Wm. Norris and W. P. Crafts for the erection of two-story brick and stone building 15x60 feet.

Lebanon, Tenn.—Gymnasium.—W. G. Seagraves & Co. have contract to erect proposed gymnasium for the Castle Heights Training School after plans by Thompson, Gibel & Asmus, Nashville, Tenn.; building to be

two stories, brick and stone and cost \$5500; heated and lighted by electricity.

Lexington, Va.—Administration Building. W. B. Sneed & Co., Lynchburg, Va., have contract to erect administration building at the Virginia Military Institute.

Lynchburg, Va.—Opera-house.—The Academy of Music has been incorporated, with capital of \$40,000, to build the opera-house recently mentioned. Plans and specifications have been completed, and call for a modern structure. Local contractors will be awarded the contract.

Marion, S. C.—Jail.—I. P. Stackhouse, county supervisor of Marion county, will open bids May 2 for the erection of brick and stone jail at Marion. Plans and specifications can be seen at office of county board of commissioners, Marion, or at the office of Charles C. Wilson, architect, Columbia, S. C. Certified check for \$100 must accompany each bid. Board reserves usual rights.

Mexia, Texas.—School Building.—City will erect \$30,000 brick school building. Address The Mayor.

Morgantown, W. Va.—Theater.—Swisher's Theater Co. will build the theater reported last week. Structure will be a combined theater and business block, costing probably \$120,000. Leon H. Lempert & Son, architects, Rochester, N. Y., will doubtless prepare the plans and specifications.

Nashville, Tenn.—Theater.—Jake Wells, general manager Bijou Theatrical & Amusement Enterprises, Richmond, Va., has let contract to the Amalgamated Theatrical Building Co. of New York for \$75,000 theater with a seating capacity of 1600.

New Decatur, Ala.—Business Building.—Dooley & Co. have purchased site 51x104 feet on which to erect business building of brick.

New Iberia, La.—Hotel.—Chartered: Vendome Hotel & Opera House Co., Limited, for the erection of \$75,000 hotel and opera-house.

New Orleans, La.—Dwellings.—T. Dumas and associates have purchased land, comprising about 16 city squares, at \$65,000 on which to erect residences.

Norton, Va.—Office Building.—R. L. Brown will erect office building.

Oklahoma City, O. T.—Courthouse.—Plans by Berlinghof & Wells have been accepted for Oklahoma county's proposed \$100,000 courthouse; structure to be two stories, fireproof, with slate or tile roof and heated by steam.

Pine Bluff, Ark.—Hotel.—Holland & Lambert will erect hotel building.

Port Lavaca, Texas.—Hotel.—C. U. Ganey, president Bay Trading Co., will erect modern hotel of 35 rooms.

Portsmouth, Va.—Business Building.—M. D. Eastwood will erect three-story brick building at a cost of \$300 to replace structure recently burned.

Richmond, Va.—College Improvements.—Virginia Agricultural and Mechanical College and Polytechnic Institute will expend \$165,000 in improvements, including erection of agricultural hall, mess hall, dormitory, engineering building, and to enlarge shops.

Richmond, Va.—Warehouse.—Straus, Gunst & Co. are having plans prepared for the erection of four-story warehouse of brick.

Richmond, Va.—Business Building.—Virginia State Insurance Co. has let contract for the completion of its \$75,000 building to N. E. Ancarrow. Plans were prepared by Noland & Baskerville.

Romney, W. Va.—Church.—Methodist Episcopal Church, South, reported last week as having let contract to John G. Clower for erection of edifice, will expend \$6000; structure will be of brick, with ornamental windows in each gable, slate roof, steel ceilings, rough rubble foundation, local stone, main auditorium 46x28 feet. Architect Loudsbury, Cumberland, Md., prepared the plans.

Savannah, Ga.—Home.—German Friendly Society will erect three-story pressed-brick home building to cost \$80,000. Bids will be asked soon.

Savannah, Ga.—Masonic Temple.—Masonic Temple Association is having plans prepared by H. W. Witcover for its proposed \$75,000 temple.

Shelby, Miss.—Bank Building.—Citizens' Bank will erect bank building.

South Boston, Va.—Warehouse.—W. D. Hill will erect tobacco warehouse; structure to be of brick, 100x210 feet.

Staunton, Va.—Hospital.—Frank Dull has prepared plans for the erection of proposed King's Daughters' Hospital.

Tallapoosa, Ala.—Bank Building.—First National Bank will erect modern bank building.

Tampa, Fla.—Sanitarium.—A. H. Parslow has completed plans and will advertise for

bids at once for the Centro Espanol Sanitarium to be erected on the Bayshore Boulevard; structure to be of brick and cost \$50,000.

Upperville, Va.—Dwelling.—R. Dulany will rebuild Grafton Hall recently burned at a loss of \$75,000.

Victoria, Texas.—Building.—Jul. Leffland, architect and superintendent, Victoria, will open bids April 20 for erecting three-story brick and stone building for Nazareth Academy. Plans and specifications can be seen at office of architect. Certified check for \$1000 must accompany each bid. Usual rights reserved.

Washington, D. C.—Flats Building.—Julius Wenig has prepared plans for three three-story flat buildings on Northwest street.

Washington, D. C.—Warehouse and Stable.—Washington Storage Co. has had plans prepared by Julius Wenig for the erection of warehouse and stable 95x155 feet.

Washington, D. C.—Residences.—Wright & French are erecting four two-story dwellings. Chris. Heurich is having plans prepared for a row of dwellings. William H. Bohannon has had plans prepared by C. E. Webb for three two-story residences.

Washington, D. C.—Apartment-house.—Francis A. Duehay is having plans prepared by T. F. Schneider for the erection of seven-story brick and stone fireproof apartment-house.

Winnboro, Texas.—Church.—C. H. Morris, chairman building committee, Methodist Church, Winnboro, will open bids April 15 for erecting brick veneered church building. Plans and specifications on file at office of architect, T. J. Galbraith, Milford, Texas, and at First National Bank, Winnboro. Certified check for \$100 must accompany each bid. Usual rights reserved.

Yazoo City, Miss.—School Building.—Jefferson Construction Co., 335 First National Bank Building, Birmingham, Ala., has contract at \$32,634 for erection of school building to replace one recently burned. R. H. Hunt, Chattanooga, Tenn., prepared the plans.

RAILROAD CONSTRUCTION.

Railways.

Anderson, Ind.—The Kansas City & Topeka Railway Co. has been incorporated, with James A. Van Osdel of Anderson, president, to build a line from Kansas City, Mo., to Topeka, Kan. The full list of directors is as follows: John R. Mulvane, C. J. Devlin and Charles S. Gleed, all of Topeka; James A. Van Osdel of Anderson, Ind.; Henry L. Turner, Elsworth B. Overshiner, Alvred B. Nettleton, Gustavus A. Wullop and Arthur V. Overshiner, all of Chicago.

Anderson, S. C.—Dr. George E. Coughlin writes the Manufacturers' Record that the proposed electric railway will be 35 miles long, connecting Anderson, Belton, Williamston, Pelzer, Golden Grove, Piedmont, Gant and Greenville; maximum grade, 2 per cent.; maximum curves, 4 degrees; rails, 70 pounds; bridges to sustain at least 100-ton electric locomotives, with modern freight trains. S. H. Knight is chief engineer. The location survey has just been completed, and it is expected two months will pass before bids can be received.

Annapolis, Md.—Governor Warfield has approved the bills incorporating the Pearson & Baltimore Railway Co., the Baltimore, Annapolis & Bay Side Railroad Co., the Bachman's Valley Railroad Co., the Wilcombe & Somerset Electric Power Co., the Stewartstown & Susquehanna Railroad & Power Co., the Washington, Legore & Gettysburg Railway & Power Co., and the Calvert Electric Light & Railway Co., the incorporations of which were previously reported in the Manufacturers' Record.

Annapolis, Md.—Governor Warfield has signed the following bills of incorporation: Middletown & Cecilton Railway Co., Stewartstown & Susquehanna Railway & Power Co., Hagerstown, Smithsburg & Pen-Mar Railroad Co., Queen Anne's Electric Light & Transportation Co., Catocin & Pen-Mar Railroad Co.

Auburn, Ala.—G. N. Mitcham, civil engineer, is reported as saying that the preliminary survey of the proposed Opelika & Auburn Electric Railway shows that the line will be 10.27 miles long along the route of the dummy railroad. There will be 32,000 cubic yards of grading to be done. Rush Taylor of Opelika and others are interested.

Augusta, Ga.—Mr. Fred T. Lockhart, one of the incorporators of the Augusta & Elberton Railroad, is reported as saying that surveys have been made from Augusta to Lincolnton, 45 miles, and that there is 20 miles of grade from Augusta to Kiokee. The entire line will be 60 miles long from Augusta to

Elberton, Ga. Grading contracts to finish the line are to be let immediately.

Baton Rouge, La.—Mr. Robert A. Hart writes the Manufacturers' Record that the proposed Baton Rouge & Northeastern Railway will be about 35 miles long and will connect Baton Rouge with Grangeville. It will connect at Baton Rouge with the Louisville, New Orleans & Texas and the Shreveport & Red River Valley lines.

Birmingham, Ala.—Mr. F. J. O'Connell, secretary of the proposed Central Railway of Alabama, 530 Woodward Building, writes the Manufacturers' Record as follows: "Myself and associates are at present negotiating to place bonds, and if successful the Central Railway of Alabama will be built."

Chicago, Ill.—Reported that the Illinois Central Railroad will survey for a line from Hodgenville, Ky., to Nashville, Tenn., about 120 miles. A. S. Baldwin is engineer of construction.

Cincinnati, Ohio.—The Queen & Crescent Route is reported to be surveying near Warburg, Tenn., for the proposed Emory Valley Railroad, which is to run up Emory river to the State coal lands.

Corpus Christi, Texas.—The St. Louis, Brownsville & Mexico Railway is reported to have completed the grade all the way to Brownsville, and to have laid more than 100 miles of track.

Covington, La.—Five carloads of rails have arrived for the extension of the East Louisiana Railroad. It is reported that right of way has been secured for 16 miles north. N. G. Pearsall is vice-president and general manager.

Cumberland, Md.—Work is now being pushed as hard as possible on the Western Maryland extension between Cumberland and Cherry Run, and the masonry work will be rushed so as to complete it as nearly as possible during the summer.

Dallas, Texas.—The Gulf & Pacific Railway Co. has organized by electing officers as follows: C. C. Waller, president; W. I. Young, vice-president; L. J. Thornhill, secretary; C. H. Steele, treasurer; Israel Dreeben, general attorney.

De Queen, Ark.—The De Queen & Eastern Railway is reported to have built an extension from Locksburg south six miles, and that an extension to Hot Springs is expected. Herman Dierks is vice-president and general manager.

Durham, N. C.—Gen. Julian S. Carr is reported to be pushing his plan for building an electric railway from Durham to Raleigh, and also from Durham to Chapel Hill, connecting with the street railways in both Raleigh and Durham.

Easley, S. C.—Dr. R. Frank Smith of Easley is reported interested in a plan to build an electric railway from Easley to Anderson. L. R. Watson and W. H. Tucker of Hopewell township are also said to be interested.

Elkins, W. Va.—Mr. W. H. Bower, general manager of the Coal & Coke Railway, writes the Manufacturers' Record that nine miles of the work on the Frenchton section has been awarded to the Smith Construction Co. of Philadelphia, Pa.

Elm Grove, W. Va.—The Elm Grove, Eastern & Majorsville Railroad has applied for a franchise to connect the three places. George Hand of Elm Grove and others are interested.

Fort Smith, Ark.—The Fort Smith & Western Railroad has filed a mortgage to secure \$7,500,000 of bonds, part of which will be used for extensions. H. A. Schwanecke is chief engineer.

Fort Worth, Texas.—The Northern Texas Traction Co. will, it is reported, build an extension about one mile long.

Galveston, Texas.—Mr. C. F. W. Felt, chief engineer of the Gulf, Colorado & Santa Fe Railway, writes the Manufacturers' Record denying the press report that it is proposed to extend the Cane Belt Railway along the Gulf coast towards Mexico. He says that no survey for such an extension has been made.

Glasgow, Mo.—Engineers for the proposed Missouri Central Electric Railway are reported to have completed the survey from Glasgow to Kansas City, and will now survey west from St. Louis. Howard Ellis is secretary.

Greenville, S. C.—A charter has been granted for the proposed Greenville & Knoxville Railroad.

Harrisburg, Pa.—The Buffalo Creek & Gauley Railroad Co. has been incorporated in West Virginia to build a line from Clay Court House to Camden-on-Gauley, by John Y. Boyd, James M. Cameron, Henry McCormick, Jr., and Vance G. McCormick of Harrisburg, Pa., and Bud Thompson of Martha Furnace, Pa.

Hattiesburg, Miss.—The Pearl & Leaf River Railroad has completed its extension from White Sand to Silver Creek, making the line now 55 miles long, and has assumed its new name, the Mississippi Central Railroad. There is no change in the officers.

Independence, Mo.—The Maywood & Sugar Creek Railroad has been incorporated to build a connecting line two miles long from Maywood, on the Kansas City Southern Railroad, to the Atchison, Topeka & Santa Fe tracks. W. J. Clark, T. T. Crittenden and others are the incorporators.

Jackson, Miss.—Mr. A. M. Nelson, cashier of the Jackson Bank, and also treasurer of the Mississippi Land & Investment Co., writes the Manufacturers' Record that W. R. Paige of Terre Haute, Ind., is locating the line of the proposed electric railway from Jackson to Vicksburg with a corps of engineers. It will be 45 miles long via Clinton, Bolton, Edwards, Champion Hill and Bovina.

Kansas City, Mo.—Reported that the Interstate Railway Co. has been chartered to build a line from Kansas City to Duluth, Minn., with a cross-line from St. Louis to Sioux City; also with a branch from Marceline, Mo., to Coon Rapids, Iowa, via Fes Moines. Construction is to begin at Line Creek, Clay county, Missouri, next week.

Laurel Fork, Va.—Reported that survey will begin immediately by Payne & Jackson of Williamson, W. Va., for the proposed electric railway from Roanoke, Va., to Mt. Airy, N. C., in which C. H. Stanley of Laurel Fork and others are interested.

Laurens, S. C.—Allan Bramlett and J. R. Gallagher of Laurens are reported to have been awarded the contract by the Ware Shoals Manufacturing Co. for a railroad from Barmore, on the Southern Railway, four miles to Ware Shoals, grading to begin immediately.

Lexington, Ky.—Reported that a deal financed by J. B. Haggin will be closed shortly for building interurban electric railways to connect Lexington, Winchester, Versailles, Richmond and Nicholasville, Ky.

Louisville, Ky.—John P. Willoughby, general land agent of the Louisville & Nashville Railroad, is reported as saying that the question of building a line from Huntsville to Cullman, Ala., will soon be acted upon by the board of directors. R. Montfort is chief engineer at Louisville.

Marksville, La.—The Louisiana Central Railway Co. has filed its charter to build a line from Monroe to New Iberia through Avoyelles parish. George W. Decker of Newport, Ark., is president, and Otto Mears, who is president of the Louisiana Construction Co., is a stockholder. Twenty miles will, it is reported, be built soon. The directors of the railroad include I. C. Popper, vice-president; E. R. Butler, secretary and treasurer; William C. Duvall and William H. Peterman.

McComb City, Miss.—Capt. R. T. Powell, in charge of the grading and construction work, is reported as saying that the Liberty-White Railroad from McComb City to Liberty, 50 miles, will be graded by July 1, and that tracklaying will then begin.

Memphis, Tenn.—The Memphis, Indianola & Gulf Railroad Co. has recorded its charter in Mississippi, the purpose being, as previously reported, to build a line from Memphis, Tenn., via Indianola, Miss., to some point on the Gulf coast. The officers are W. E. Ringold, president; F. M. Anderson, vice-president; Robert Craig, secretary; W. T. Pitts, treasurer; J. W. Buchanan, general attorney.

Mt. Sterling, Ky.—It is proposed to build a railway from Indian Field, on the Lexington & Eastern, to Mt. Sterling, about 10 miles. Among those interested are R. M. Trimble, John C. Wood, H. Clay McKee, W. R. Nunnally and L. M. Newmeyer.

Muskogee, I. T.—The Muskogee Union Railway Co. has, it is reported, decided to increase its capital from \$1,200,000 to \$7,500,000, and the charter has been amended to permit of an extension southwest to the Red river and to Whitesboro, Texas, on the Texas Pacific; also northeast to Joplin, Mo.

New Orleans, La.—Knox, George & Co., engineers, Tulane-Newcomb Building, are reported to have finished the survey for the proposed electric railway between Summit and Magnolia, Miss., about 12 miles. Such a line would, it is estimated, cost about \$250,000.

Norfolk, Va.—The common council is reported to have granted the petition of the Bay Shore Terminal Railroad to extend its tracks.

Norton, Va.—Work is reported begun on the extension of the Virginia & Kentucky Railway from Gladesville Junction to Norton, three miles; J. E. Cashion, C. E.; F. M. McClure, superintendent.

Oklahoma City, O. T.—The Missouri, Kansas & Oklahoma Railway is reported to have put in service its new line from Coalgate, I. T., to Oklahoma City.

Palestine, Texas.—Mr. J. D. Trammell, chief engineer International & Great Northern Railroad, writes the Manufacturers' Record concerning the press report that the company proposes to build from Cotulla to Carizo Springs, saying that he knows of no such extension being contemplated. As for the terminal improvements to be made at Austin and San Antonio, he writes that they are not sufficiently advanced to permit of giving information.

Quitman, Miss.—Mr. C. F. Thompson, general manager and treasurer of the Mississippi & Eastern Railroad, is reported as saying that the line will run from Quitman, Miss., to the Tombigbee river, 35 miles. It has been graded from Quitman to Carmichael, 12 miles; two miles of track have been laid, surveys have been continued from Carmichael to Melvin, nine miles, and grading is in progress. J. W. Glynn is chief engineer.

St. Louis, Mo.—L. S. Berg, president of the New Orleans Terminal Co., Frisco system, is reported as saying that the Frisco will build its own line from Marion, Ark., to Baton Rouge, La., about 327 miles, and pending its completion trains will begin running about June 1 to New Orleans via Tupelo, Miss. J. F. Hinckley is engineer of construction, 809 Fullerton Building, St. Louis, Mo.

St. Louis, Mo.—Surveys are reported being made for an extension of the Arkansas Valley & Western Railway (Frisco system) from Avard, O. T., to Hooker, O. T., on the Rock Island system, in Beaver county, about 120 miles. J. F. Hinckley is chief engineer of construction, 809 Fullerton Building, St. Louis.

St. Louis, Mo.—The Mobile & Ohio Railroad, it is reported, contemplates a number of extensions in Mississippi, much of this new construction being projected for developing timber land. C. S. Clarke is general manager.

St. Louis, Mo.—Mr. S. B. Fisher, chief engineer Missouri, Kansas & Texas Railway, writes the Manufacturers' Record that he doesn't know anything about a plan to build an extension to Arkansas Pass reported in press dispatches from Texas.

Texarkana, Texas.—Mr. G. Munz, president and general manager of the Northeast Texas Railway, is reported as saying that eight miles are completed and grade is finished for 15 additional miles. The line will be 48 miles long from Texarkana to Dainersfield, connecting with the Missouri, Kansas & Texas.

Timpson, Texas.—Reported that the Texas, Sabine Valley & Northwestern Railway will be extended from Timpson to Center, Texas.

Tremont, La.—The Tremont & Gulf Railroad is reported to be ready to award contracts for eight miles of track with 60-pound rails. The line will include about 1400 feet of trestle, averaging about seven feet high. W. G. Collier is general manager.

Valdosta, Ga.—Reported that \$65,000 has been subscribed for the proposed railroad from Valdosta to Lellaton. J. W. West and others compose the committee.

Victoria, Texas.—Reported that the plan to build the Guadalupe Valley Railroad will be revived and the line built. Several years ago it was graded from Victoria to O'Connersport, on Lavaca bay, a distance of about 30 miles. It was also graded north from Victoria towards Yoakum, about 40 miles. It may now be extended further north to Smithville to connect with the Missouri, Kansas & Texas Railway, altogether about 110 miles. T. P. White of Victoria and others are interested.

Washington, D. C.—The Southern Railway is reported to have finished 47 miles of second track between Alexandria and Orange, Va., and to have put it in use. About 20 miles more are expected to be in service within two weeks.

Washington, D. C.—Hon. H. G. Davis, 1517 H street N. W., writes the Manufacturers' Record that there is little foundation for the press report that he will build a new line called the Central Railroad of Virginia from Elkins to some point on the Atlantic coast. Mr. Davis also says: "Although the project of building to the sea has been considered by us, nothing definite has been decided."

Washington, D. C.—The Southern Railway is reported to have filed notice in Alabama that it will build a spur about one and three-quarters miles long from a point near Piper, in Bibb county, to lands of the Little Cahaba Coal Co. W. H. Wells is engineer of construction.

Waycross, Ga.—Mr. George Dole Wadley, vice-president and general manager of the Atlantic & Birmingham Railroad Co., writes the Manufacturers' Record that plans have not yet been made for the proposed work on the terminals at Brunswick, Ga., and he cannot therefore give particulars.

Waycross, Ga.—Maj. J. A. Jones and President W. A. Price of the Chamber of Commerce have called a mass-meeting for April 15 to act on the proposed extension of the Atlantic & Birmingham Railway south, about 20 miles, to connect with the branch of the road near the Little Satilla river.

Wichita Falls, Texas.—Tracklaying is reported begun on the extension of the Wichita Valley Railway known as the Wichita Falls & Oklahoma, from Wichita Falls to the Red river, 22 miles. J. E. W. Fields is chief engineer.

Street Railways.

Anderson, S. C.—The city council is reported to have granted a street-railway franchise to J. A. Brock, R. S. Ligon, George E. Prince, Dr. George E. Coughlin and others.

Chicago, Ill.—Reported that bids are being received by John W. Gates, Rookery Building, and associates for an electric railway at Port Arthur, Texas.

Galestown, Texas.—The Texas City Improvement Co. has transferred to E. W. Harvey the right to build an electric railway at Texas City.

Greenwood, Miss.—The Greenwood Electric Railway Co. has organized by electing officers as follows: Monroe McClurg, president; Samuel J. Stein, vice-president; R. T. Jones, second vice-president, and R. Thayer, secretary and treasurer. Lines will be surveyed immediately to Itta Bena and Black Hawk.

Norfolk, Va.—The Norfolk Suburban Railway is reported to be grading for its line to connect Norfolk and Indian River Gardens, work being now in progress on the property of the Wheeling Development Co. near Campostella Heights.

San Antonio, Texas.—The San Antonio Traction Co. will, it is reported, make extensive improvements.

Washington, D. C.—The Washington Railway & Electric Co. has been granted a permit to extend the Eleventh-street line from Florida avenue to Lydecker avenue. Gen. George H. Harries is superintendent.

Washington, D. C.—The Capital Traction Co. has applied to Congress for a franchise for a cross-town electric railway from Seventh street N. W. along Florida avenue to Eighth street E., and thence down Eighth street to connect with the present line on Pennsylvania avenue S. E.; also for a line on New Jersey and Massachusetts avenues past the new Union Station to Eighth street E., with a connecting track to the present line near the B. & O. depot; also for a line on M street from Rock Creek east to New Jersey avenue.

Wheeling, W. Va.—The Wheeling Traction Co. has applied for a franchise to build a track from Thompson avenue along Twelfth street to Lafayette avenue.

MACHINERY, PROPOSALS AND SUPPLIES WANTED.

Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. The MANUFACTURERS' RECORD has received during the week the following particulars as to machinery that is wanted:

Air Compressor.—See "Turpentine Plant."

Belting.—See "Turpentine Plant."

Boilers.—See "Turpentine Plant."

Boilers.—Shoop-Withers Company, 29 East Washington street, Suffolk, Va., wants good second-hand return-tubular 50-horse-power boiler; also one of 100 horse-power.

Boilers.—J. A. Mathieu, Box 267, Georgetown, S. C., wants prices on four boilers making about 1000 horse-power; new or second-hand.

Boxes.—See "Soap-factory Equipment."

Boxes.—E. S. Jessup, corner Jones and McCartan streets, Augusta, Ga., wants to

correspond with firms manufacturing light pine boxes and crates for shipping purposes.

Boxes (Paper).—Tobacco Warehouse & Trading Co., 11th and Magnolia avenue, Louisville, Ky., wants addresses of makers of paper-board boxes, smallest sizes; also of tin ointment boxes and mailing cases.

Brewing Equipment.—Annapolis Ice Manufacturing Co., Robert J. Berryman, president, Annapolis, Md., wants catalogue and full information regarding equipment for brewery.

Bridge.—Commissioners of roads and revenues of Muscogee county, Columbus, Ga., will open bids May 5 for construction of steel highway bridge across Bull creek on the Buena Vista road. There are two sets of plans and specifications for bridges; separate bids required for each bridge. Complete set of plans, profile and specifications on file at office of ordinary in courthouse at Columbus. Certified check for \$300 must accompany each bid. Usual rights reserved.

Building Equipment.—See "Steel Shutters."

Building Equipment.—J. E. Line, Jenifer, Ala., wants hot-water heater, pressed brick, stone trimmings (N. Y. O.), slate roofing, mantels, grates, electric wiring and fixtures, plumbing supplies, etc.

Building Equipment and Supplies.—Chas. Gilpin, builder, 21 East Saratoga street, Baltimore, Md., wants prices on the following building equipment and supplies: Brick, bluestone, steel beams and girders, cast-iron columns, millwork, electric wiring and fixtures, plumbing and electric elevators.

Building Equipment and Supplies.—The Woodruff-McLaughlin Company, constructing engineer and architect, Lexington and St. Paul streets, Baltimore, Md., wants prices on the following building equipment and supplies: Bricks, lumber, cement, sand, lime and all kinds of building supplies.

Building Equipment and Supplies.—John R. Wiggins & Co., 323 St. Paul street, Baltimore, Md., wants catalogues and prices on all kinds of building equipment and supplies; also would like to communicate with bricklayers.

Building Material.—Mt. Clamrock Mantel Co., Greensboro, N. C., wants to correspond with parties handling terra-cotta fireproofing.

Building Material.—Stone Building Supply Co., Greensboro, N. C., wants prices on red slate.

Building Materials.—John Clower, Romney, W. Va., wants prices on building materials.

Building Materials.—E. J. Buchanan, Lexington, N. C., wants prices on finishing material for 10-room residence.

Building Materials.—T. A. Rape, Ballinger, Texas, wants prices on iron front, glass fronts, etc., for business building.

Building Materials.—Sterling Cotton Mills, Franklin, N. C., wants addresses of manufacturers of iron store fronts.

Cannery Equipment.—John Moore, Bridgeport, W. Va., wants equipment for canning factory.

Canning Equipment.—W. F. Fry, Willis Point, Texas, wants complete equipment for canning factory.

Cans.—E. D. Green, Box 22, Sour Lake, Texas, wants to correspond with makers of oil cans; one-quart, half-gallon, one-gallon and five-gallon cans preferred; the preference is for square cans that can be sealed.

Castings.—Vesuvius Plow Works, Vesuvius, Va., wants prices on malleable castings and roofing.

Chair Machinery.—J. W. Byrn, Brownsville, Tenn., wants information regarding the manufacture of chairs, estimates on cost of equipment for producing 25 dozen daily, and full details as to best methods of selling, whether by salesmen or commission men, etc.

Coal Miners.—Geo. R. Le Baron, El Paso, Texas, wants addresses of coal mine operators in New Mexico, Indian Territory and Colorado.

Concrete Mixers.—F. H. Souder & Son, Lansdale, Pa., want three concrete mixers.

Corn Mill.—International Farm Agency, J. Coles Clay, manager, Lynchburg, Va., wants prices (dealers) on corn mill, portable, without power.

Cranes.—J. A. Mathieu, Box 267, Georgetown, S. C., wants prices on two electric cranes capable of lifting 5000 pounds 18 feet high and move that load six feet eight inches on the bridge; bridge travel at rate of 400 feet with load; length of bridge 16 feet 10 inches.

Crushing Machinery.—See "Fertilizer Machinery."

Derrick.—George Borchard, builder, 220

North Castle street, Baltimore, Md., wants derrick to hoist 40 feet.

Electrical Equipment.—Floyd & Co., Eatonton, Ga., will purchase generator and copper wire for water-power-electrical development.

Electrical Equipment.—Hamilton Ice & Cold Storage Co., Chattanooga, Tenn., wants prices on electrical equipment.

Electric Supplies.—See "Building Equipment."

Electric Wiring and Fixtures.—See "Building Equipment and Supplies."

Elevators.—See "Building Equipment and Supplies."

Engine.—Greene County Lumber Co., Bexley, Miss., wants one 16x24 Filer & Stowell second-hand engine.

Engine.—See "Turpentine Plant."

Engine.—See "Turpentine Plant."

Engine and Boiler.—Selma Cotton Mills, R. B. Whitley, manager, Selma, N. C., will want 250-horse-power engine and boilers to suit.

Engine and Boiler.—Apex Equipment Co., No. 11 Broadway, New York, wants one 30 or 40-horse-power locomotive-type boiler mounted on wheels; also one 20-horse-power upright engine.

Fertilizer Machinery.—J. W. Marshall, West Point, Va., wants prices on machinery for crushing oyster shells and converting waste from crabs into fertilizer.

Fertilizer Machinery.—Hadley, Harris & Co., Wilson, N. C., want machinery for fertilizer mixing plant of 10 tons capacity daily.

Fertilizer Machinery.—Weaver & Co., Dawson, Ga., want prices on fertilizer-manufacturing equipment. See "Oil Mill."

Fireproofing.—See "Building Material."

Flooring.—Ware Shoals Manufacturing Co., Ware Shoals, S. C., wants prices on 200,000 feet of sweet gum and maple flooring.

Flypaper-Manufacturing Machinery.—R. R. Spaugb, 325 Lucille street, Dallas, Texas, wants information regarding machinery for spreading gum on flypaper, leaving an ungummed margin on each side. He may order the construction of such a machine if necessary.

Heating.—See "Building Equipment."

Iron Works.—See "Building Materials."

Laundry Machinery.—J. E. Cashion, C. E., P. O. Box 203, Norton, Va., wants catalogues and full information regarding laundry machinery.

Machine Tools.—R. H. Maxwell, P. O. Box 85, High Point, N. C., is in the market for new or second-hand 10-horse-power motor, 24-inch planer, single-head tenon machine, hand and glue jointer, 26-inch band saw, turning lathe, single-spindle sander, etc.

Metal Novelties.—H. R. Ferran, E. L. Ferran & Co., Eustis, Fla., wants names and addresses of manufacturers of metal book racks to fit backs of opera chairs.

Mining Machinery.—W. H. Crawford & Co., 73 Arcade, Nashville, Tenn., wants a modern coal drill, new or second-hand.

Mixers.—See "Concrete Mixers."

Motors and Fans.—Cosma Manufacturing Co., Piedmont, Ala., wants to correspond with manufacturers of water motors and fans.

Oil Mill.—Weaver & Co., Dawson, Ga., want prices on cottonseed-oil-mill equipment. See "Fertilizer Machinery."

Oil Mill.—Farmers' Oil Co., Dawson, Ga., wants cottonseed-oil equipment for 20-ton mill, including engine and boiler.

Oil Mixer.—John G. Duncan Co., 316 Jackson avenue, Knoxville, Tenn., wants addresses of manufacturers of an oil mixer for mixing oils and grease.

Paving.—Wm. E. Springer, mayor, Wilmington, N. C., will open bids April 28 for paving N. Fourth street from Brooklyn Bridge to Nixon street with either vitrified paving blocks or bitulithic paving, covering 9000 square yards, approximately. Plans, specifications and profile of street can be had at the office of mayor. Certified check for \$1000 must accompany each bid. Usual rights reserved.

Pump.—See "Turpentine Plant."

Pump.—H. N. Pharr, Olivier, La., wants full particulars and lowest price on simple or compound duplex water pump in good condition; capacity 1000 or 1200 gallons per minute, minimum lift 50 feet, discharge 10 inches.

Pump.—W. L. Gardner, chairman water committee, Columbus, Miss., will open bids May 3 on one 3,000,000-gallon pump to be delivered in Columbus and installed at city pumping station.

Railway Equipment.—H. L. Lane, Esmont, Va., wants 550 tons of relaying rails weighing from 56 to 60 pounds.

Railway Equipment.—Stringfellow & Webster, Room 3, Columbian Block, Richmond, Va., wants second-hand narrow-gauge locomotive, saddle or rear tank, capacity about 20 cars; also one-half dozen narrow-gauge flat cars in good condition.

Railway Equipment.—Antler Coal & Coke Co., Rooms 10 and 11, Law Building, Lynchburg, Va., wants prices f. o. b. Antler Sliding, W. Va., on 15 or 20 tons of 12-pound relaying T rails in good condition.

Roofing.—See "Castings."

Roofing.—See "Turpentine Plant."

Roofing.—See "Building Equipment and Supplies."

Soap-factory Equipment.—Mineral Oil Soap Co., 180 Central alley, Memphis, Tenn., wants prices on soap machinery, caustic soda and other chemicals, coloring matter, and perfumery for soaps, cartons and boxes, etc.

Steel Beams.—Anderson & Moser, Tampa, Fla., want prices on I steel beams, one to be 13 feet long and one 19 feet long, 10 inches high, and 35 pounds to the foot.

Steel Shutters.—Eureka Supply Co., Chamberlain Building, Chattanooga, Tenn., wants four steel rolling shutters for inside of window in large vault, size 36x48 inches, together with four vault doors, standard size.

Stencil Dies.—McDonald Bros., Pleasant Hill, Mo., want machine for marking scales beams—that is, making indentures on the side of brass beam.

Tin Boxes.—See "Boxes."

Turpentine-plant Equipment.—Lumberton Naval Stores Co., Hattiesburg, Miss., wants two 80-horse-power boilers, 100-horse-power simple center-crank engine, elevating chains, belting, wire cables, pulleys, shafting, gearing, corrugated roofing, copper condensers, stills, refinery, wood tanks, piping, pumps, air compressors, air water pump, storage tanks, valves, fittings, retorts, etc.

Vehicle Materials.—See "Wire Spokes."

Wire Novelty.—Dillshoro Novelty Co., Dillshoro, N. C., wants addresses of wire novelty manufacturers.

Wire Spokes.—F. P. White, Shalotte, N. C., wants wire spokes for carriage wheels.

Woodworking Machinery.—See "Chair Machinery."

Woodworking Machinery.—Greene County Lumber Co., Bexley, Miss., wants one Filer & Stowell second-hand gang edger.

MEXICO.

Bank Building.—The National Bank of Mexico, Mexico City, will build modern bank building to cost about \$50,000 at Guaymas, Sonora.

Baths (Municipal).—The municipality of Cuynlan, Colima, has decided to expend about \$200,000 for the establishment of a public-baths system. Address the Jefe Politico.

Concentrating Plants.—Fortuna Mining Co., Frank Loyd, manager, Obualluco, Jalisco, will build a number of concentrating plants.

Electric-light Plant.—The municipality of Tepec proposes to establish an electric-light plant, and will soon call for bids on construction and equipment. Address Senor General Pablo Rocha y Portu, Tepec, Mex.

Electric-light Plant.—Attorney Munecas y Zimaville, Campeche, Camm., has applied for concession to build an electric-light plant.

Electric-light Plant.—The municipal electric-light plant will be doubled. It now has a capacity of 1500 incandescent and 50 arc lamps. Address General Rafael Pimentel, Tuxtla Gutierrez, Chiapas.

Electric-light Plant.—Compania Hidro-Electrica, Queretaro, Mexico, has increased capital to \$500,000 and will enlarge its electric-light plant.

Electric Plant.—Don Margarita Gonzales, Lagos, Jalisco, and associates will develop the power of water falls and generate electricity for power purposes; irrigation system will also be installed.

Furniture Factory.—The American Furniture Co. will build modern factory to replace plant recently destroyed at a loss of \$100,000. Company has New York offices on West 18th street.

Garage.—The Automobile Club, P. Escandon, president, City of Mexico, will build automobile garage.

Hotel.—Proprietors of La Conquista Hotel, Saltillo, Mexico, contemplate building modern structure to replace hotel recently burned.

Irrigation System.—See "Electric Plant."

Iron and Steel Plant.—Durango Iron & Steel Foundry Co., Durango, Mexico, will enlarge its plant.

Malt Factory.—Domingo Barrios Gomez, Canada, near Queretaro, will expend \$200,000 to build and equip plant for manufacturing malt.

Meteorological Observatory.—A meteorological observatory will be established at Campeche, Camp., and considerable apparatus has been ordered from Germany and France. But it is stated that further equipment will be needed. Address Senor Don Luis Garcia.

Mining Plant.—George Lambeth, El Paso, Texas, is organizing company to develop mining properties in the State of Sinaloa and will build modern mining plant.

Mining Plant.—Y. S. Moorhead of the Mexican Mining & Exploration Co., Washington, D. C., has leased and will develop mines near Monterey, New Leon. He will make improvements to the present mining plant, the first installation to be a wire tramway.

Mining Plant.—Corralitoc Company, Candelaria, Chihuahua, will rebuild its smelting and concentrating plants recently burned.

Power Plant (Electrical).—H. H. Pilley, chief engineer of the Guanajuato Mining Co., Guanajuato, has concession to utilize the falls of Zitacuero for developing power and generating electricity for sale to industrial enterprises.

Railway Equipment.—Chihuahua & Pacific Railroad Co., Chihuahua, Chl., announces it is in the market for 60 standard-gauge flat cars.

Smelter.—Mat Dalgreen, Pedricena, Durango, contemplates building a smelter.

Smelter.—Mazapl Copper Co., Concepcion del Oro, Saltillo, will build a smelter.

Smelter.—Transvaal Copper Co., Moctezuma, Sonora, intends to build smelter of 500 tons capacity and concentrator of 1000 tons capacity.

Smelter.—A company is being formed in Torreon to build smelter. Address Senor Lic. Don Miguel Cardenas, Saltillo, Coahuila.

Smelter.—Corralitos Mining Co., Juarez, Chihuahua, contemplates rebuilding smelter recently burned at a loss of \$125,000.

Water-power Plant.—George B. Hyde, Silao, Guanantamo, has applied for concession to utilize the waters of the Zempoala river at three different locations to provide electric-power for mining plants.

Railways.

Steam Railroad.—The new railroad connecting Topia, Durango and Culiacan, Sinaloa, will be commenced with regard to construction work in April. Address Senor Don Juan Santa Maria, Durango, Mexico.

Steam Railroad.—The contract for building an extension of the Chihuahua & Pacific Railroad from a point near El Carpio to Tamosachic, 86 kilometers, is reported awarded to Ryan & Dudley of Chihuahua.

Steam Railroad.—The Jimulco Mining Co. of Jimulco, Coahuila, has secured a concession for a narrow-gauge railroad six miles long to connect the mines with the Jimulco hacienda.

Steam Railroad.—The new line of the Vera Cruz & Pacific Railroad, connecting the main line at Los Coscos with the port of Vera Cruz, will soon be commenced. Address the Vera Cruz & Pacific Railroad Co., Orizaba, Vera Cruz.

Steam Railroad.—The owner of the Cigarro mine, the Cigarro Mining Co., is considering the construction of a line to connect the mining property with the Parral branch of the Mexican Central Railway. Address the Cigarro Mining Co., Parral, Chihuahua.

Steam Railroad.—The construction of a railroad is projected for the State of Oaxaca, in which the governor is largely interested. The new line will connect Parian with the richest agricultural section of the State. Address Senor Lic. Don Emilio Pimentel, Oaxaca, Mexico.

Steam Railroad.—A telegram to Mexico City says the Grand Mineral Railroad, which is being built north from San Jose de Sitio, in the State of Chihuahua, will be continued to Denning, N. M., to connect with the Southern Pacific.

Steam Railroad.—A route for a new line from Saltillo to Monterey is being surveyed by the Coahuila & Pacific Railroad. It will be 108 kilometers shorter than the National Railroad. Application will be made for a concession if the engineer's report is satisfactory, and work will begin immediately. Address A. W. Lillendahl, president and general manager, Saltillo, Coahuila.

Steam Railroad.—Edward L. Peckham, vice-president and general manager of the Denver, Enid & Gulf Railroad, it is reported, intends to construct a railroad running through the timber region of the State of Chiapas 120 kilometers long. Address Martin de Gonzales, Zacatecas, Mexico.

Steam Railroad.—The Mexican Coal & Coke Co., Las Esperanzas, Coahuila, has obtained a concession authorizing an extension of its railway from Barroteran to the Las Esperanzas coal fields.

Street Railroad.—A street railroad will be constructed between Progreso and Chixouluu, Yucatan; whether to be operated by

animal traction or electricity has not yet been decided. Address Senor Don Olegario, Molina, Merida, Yucatan.

Steam Railroad.—The announcement is made that the Transvaal Copper Co. is in the Moctezuma district, State of Sonora, and will construct a seven-mile railroad to connect with the Nacoari line.

INDUSTRIAL NEWS OF INTEREST

To Represent Eureka Fire Hose.

J. M. Hardy, who is widely known in the trade, will be connected with the Eureka Fire Hose Co., 113 Barclay street, New York, after May 1, with full charge of the company's fire-hose business in the New England States.

Gone to Cuba.

Thomas G. Jones of the firm of G. W. Lehmann & Son, chemists and mining experts, Baltimore, has left for Cuba to make an exhaustive examination of newly-discovered natural phosphate deposits on the island. He will be away about a month.

Furniture Plant for Sale.

One of the modern furniture factories of the South, formerly owned by the Sanford Furniture Manufacturing Co., is on the market. The property has been operated only about 18 months, and is well equipped. Particulars regarding the opportunity to purchase can be obtained by addressing W. J. Edwards, Sanford, N. C.

Death of John L. Weeks.

John L. Weeks, treasurer and general manager of the American Steam Gauge & Valve Co., Boston, died last week as the result of complications arising from an operation for appendicitis two years ago, his death being entirely unexpected. Mr. Weeks was born in Akron, Ohio, 38 years ago, and had been with the above company more than 15 years, first as traveling salesman, then manager of the Chicago office, and finally was appointed general manager five years ago.

The White-Blakeslee New Plant.

The plant of the White-Blakeslee Manufacturing Co. at Birmingham, Ala., destroyed by fire on the 12th of February last, has been rebuilt along the lines of the most modern machine-shop construction, with more than double the floor space of the former building, and with complete new equipment of tools of the most modern design adapted to the production of the company's line of manufacture. The rebuilding and putting into active operation a plant of this size within 60 days of its complete destruction by fire is a record feat.

Crocker-Wheeler Doubles Capital.

A doubling of its capital stock, which has been \$1,000,000, is announced by the Crocker-Wheeler Company, manufacturer and electrical engineer, of Amper, N. J. The company was organized in 1892 by Dr. Schuyler Skates Wheeler and Prof. Francis B. Crocker on a relatively modest basis. It now has 15 branch offices from Boston to San Francisco, and does one of the largest businesses in the world in electric-power apparatus. The capitalization was several times increased, until in 1899 it had become \$1,000,000. In view of the rapidly-expanding business, the stockholders have now decided to increase this amount to \$2,000,000.

Schwarz System Brick Plants.

In connection with the development of the South it is noticeable that that section is active in adopting the new processes for manufacturing bricks. The Schwarz System Brick Co. is meeting with success in introducing its system. It has just started a plant at Charleston, S. C., for the National Sand-Lime Brick Co., and is installing another at Birmingham, Ala., while contracts for others at Mobile, Ala., and elsewhere are now on file. The Schwarz System Brick Co. of Canada has also been organized and will erect several plants in the Dominion. The New York offices of the Schwarz Company are at 8-10 Bridge street.

B. E. Crafts at New Orleans Office.

The J. A. Fay & Egan Co. of Cincinnati, Ohio, announces that its New Orleans office has been placed under the management of B. E. Crafts, who was with the Buffalo offices. Mr. Crafts has been identified with the woodworking machinery business for 24 years, and is skilled in all its branches. He has operated, designed and drafted woodworking machinery, worked in the machine and pattern shops, tested machinery in the factory, and repeatedly gone on the road to repair and reconstruct broken-down machines. He is thoroughly versed in making

mill plans. The New Orleans offices are located in the Hibernia Bank and Trust Building.

Modernizing a Plant.

The extensive improvements contemplated by the Phoenix Cement Co., Nazareth, Pa., have all been laid out by Dodge & Day, modernizing and contracting engineers, Newtown, Philadelphia, Pa., and it is thought the work will be started in the near future. Most of the buildings will be enlarged, electric transmission used throughout, and the entire plant thoroughly modernized in order to materially increase the output to keep pace with the growing demand for the company's product. This will necessitate the installation of considerable additional power equipment, as well as a 200-kilowatt generator, tandem compound engine for generator, one 50 and one 75-horse-power motor and a number of smaller motors, charging cars, turntable, coal and ashes conveyor, underfeed stokers, steam locomotive for hauling cars to and from the quarries, electric hoist, electric air compressor, blower and exhaustor, air-cooling conveyor, belt conveyor, elevators, automatic weighing machine, extension of track system, etc.

To Visit Foreign Agents.

W. F. Warden, president and general manager of the Burt Manufacturing Co., maker of the Cross Oil Filter and the Burt Exhaust Head, Akron, Ohio, will sail for Europe April 15. Mr. Warden goes in the interest of his company, which has a large trade in all the principal countries of the world. He will confine this trip to visiting agents of his company in England, France, Germany, Belgium, Norway, Sweden, Denmark, Russia, and, if time permits, he will visit those in Switzerland, Greece and Spain. In Mr. Warden's absence J. Asa Palmer, secretary of the company, will have full direction of its affairs. Among the many large foreign orders received recently by the Burt Manufacturing Co. is one from its agent at Durban, South Africa, for 30 gross of oil filters, and one from its agent at St. Petersburg, Russia, for oil filters for the Russian government. The Burt Manufacturing Co. has issued an interesting picture showing a 30-inch exhaust head it recently made for the Jones & Laughlin Steel Co., Pittsburg. This exhaust head is 10 feet high, 9 feet 4 inches in diameter and weighs 2700 pounds.

To Establish New Orleans Office.

The Carolina Portland Cement Co. of Charleston, S. C., will establish an office in New Orleans and will have a large warehouse on the water front. This will provide the company with facilities for handling to better advantage the trade of Louisiana, Texas, Mississippi and Alabama. For several years the Carolina Company has imported largely of foreign cements through Pensacola, New Orleans and Galveston, and finds the New Orleans office demanded by conditions. Mention has several times been made in this column of the facilities of the Carolina Portland Cement Co., and it may be recalled that it is sole selling agent for the Old Dominion Portland cement and Vulcanite Portland cement, exclusive sales agent for the Alabama brand Portland cement and Magnolia brand, the semi-grade Portland. It also has a fire-brick plant of 60,000 capacity daily at Killian, S. C., and is sales agent for the Gager Lime & Cement Co. of Chattanooga, besides operating its own plant of 700 barrels daily capacity at Hardyville, Ala. In the sewer-pipe line the company handles the product of the Southern Sewer Pipe Co. of Birmingham. For other classes of building materials the company represents well-known manufacturers.

Armored Concrete for Baltimore.

Armored concrete for floors, columns and girders seems destined to be more generally used in the rebuilding of Baltimore than it has ever been before in this country. The several examples of reinforced concrete which so creditably came through the fire here have put all systems of armored concrete into favor with the public, and the agents of the various systems have not been slow to take advantage of the fact. Offices have been opened here by the representatives of many of those systems, the latest of whom is Chas. M. Ellinger of the Ellikop

system of the Steen Concrete Construction Co. of Boston, who has established headquarters at 404 St. Paul street, Baltimore. The Ellkop armored concrete system differs from some of the other methods, in that it does not depend entirely upon adhesion. Here the tension rods are positively locked together, forming continuous, firm and solid beams and floors. The system of construction is declared to be particularly adapted to warehouses, office buildings, hotels, hospitals, factories, lodging houses, stables and car sheds, foundations, walls, pillars, floors, staircases and roofs of all kinds, tanks, reservoirs, coal hoppers, grain elevators, etc., viaducts, all kinds of bridges, culverts and aqueducts.

Heating and Ventilating a Fiberloid Plant.

At Indian Orchard, Mass., there is a great industrial plant for manufacturing fiberloid. This plant's product is practically the same as celluloid, but it is made from a different base by a somewhat different process. The base of celluloid is tissue paper, while fiberloid is made from fine cotton yarn or rovings. Collars, cuffs, combs, brushes and mirror backs are some of the products manufactured at this plant; also large sheets of fiberloid of various colors, from which are made various articles, such as imitation tortoise-shell combs. These were formerly manufactured by the dry process, in which there was some danger from explosion, but in the new wet process they are said to be entirely safe. The plant is built in the latest design and most approved methods of modern mill construction, from plans by Fred S. Hinds, a Boston mill architect, and covers a large area of ground. The 20 buildings are heated and ventilated by the Sturtevant Fan System. The air is filtered before it passes through the heater, and is forced into the rooms by the fan. The temperature is automatically controlled and maintained constant, thus assuring health and comfort. The other buildings are heated and ventilated from three main heating apparatus. Hot air is drawn from the outside, filtered, heated and conveyed through underground brick ducts to the various buildings to vertical flues built into the brick walls, and enters the room at a low velocity through openings provided with dampers and registers. Not only is the fan system here applied for heating and ventilating purposes, but also for special drying, cooling and exhausting arrangements. In the sheet dryhouse there is a special Sturtevant apparatus for drying the sheets of fiberloid; in the sheet-room is a special cooling apparatus for maintaining an even cool temperature necessary in the process of manufacture, and a special ventilating equipment is installed in the rolling mill to keep the atmosphere pure and healthy. The equipment of this extensive plant illustrates some of the various uses to which the fan is now applied.

TRADE LITERATURE.

Our References.

With the title, "Our References," there is being issued a booklet which contains some interesting facts concerning ice-making and refrigerating machinery. The booklet concerns especially the machinery built by the York Manufacturing Co. of York, Pa. It presents a list of the sales made by that company from January 1, 1898, to January 1, 1904, including nearly 300 can ice-making plants of from 2 to 200 tons capacity, about 150 refrigerating plants of from 4 to 600 tons capacity, and some 60 brewing plants of from 7½ to 225 tons capacity. These equipments were shipped to and installed in all parts of the United States, in Europe, Central and South America, Mexico and other parts of the world. Many other orders are also listed for complete plants and for various supplies.

Canning Machinery and Supplies.

Messrs. A. K. Robins & Co. (S. M. Sindall, proprietor), Baltimore, Md., have been identified for years with the specialty of furnishing machinery and supplies for the canning industry. They are constantly introducing new specialties continually demanded by the industry, and furnish either individual machines or entire equipment complete, estimates for which are submitted on receipt of details as to what is required. The company also manufactures sheet-iron work, contracts for gas, water and steam piping, and deals in stoves, ranges, furnaces, etc. Catalogue E and net price-list of the Robins offerings is now ready for distribution. It contains illustrated facts of interest concerning supplies for canners. For a copy address the offices at 724 E. Pratt street, Baltimore, Md.

Saved by Automatic Sprinklers.

One of the strongest points made by Capt. John Steven Sewell, United States engineer-

ing expert, who has not minced matters in making a report on the Baltimore conflagration with suggestions as to what might be done to render fireproof buildings less liable to destruction, is the importance of installing a complete system of cornice sprinklers. The United States Sprinkler Bulletin for April devotes a page to a demonstration of the fact that the O'Neill Building in Baltimore was saved solely through its automatic sprinkler system. The Bulletin goes still further in the declaration that if the sprinkler had been in use over Baltimore the conflagration would have been prevented. The very apt suggestion is made that the time to put out a fire is when it starts, and experience doubtless justifies the further statement by the Bulletin that the only perfect device for this purpose is the automatic sprinkler. This bulletin is published by the General Fire Extinguisher Co. of Providence, R. I.

Two Booklets on Roofing.

A brief history of iron and its application to roofing is being issued. The booklet traces the manufacture of roofing tin from the early days to the present time, besides giving a full description of how to construct a good tin roof, also valuable tabulated data useful to every person interested in the building trade. Another booklet contains information relative to the American Sheet Steel Co., illustrations of its mills, tables showing weights of sheets and bundles of standard sizes of galvanized sheets, Woods' refined sheets, Woods' patent planished iron and corrugated sheets, net prices per pound and square foot at given rate of discount, etc. The two publications referred to are being distributed by the American Sheet & Tinplate Co., Frick Building, Pittsburg, Pa. Applications should be addressed to W. C. Cronmeyer, advertising agent, 310 Carnegie Building, Pittsburg, Pa., and should state name, address and occupation of the applicant, and where this notice of the booklets was seen.

Fireproof Windows Protect.

Underwriters were afforded a costly object-lesson in the value of so-called fireproof "skyscrapers" by the Baltimore fire. While the results demonstrated the soundness of the principle on which modern fireproof construction is based, they also proved that unless these principles are consistently carried out tall buildings may be a source of great danger. This consistency calls for the protection of window openings, and had such protection been present in Baltimore there is little doubt but that the fire would have been checked before it attained such great headway. The Lupton Window is one of the latest types of approved protection for window openings. It is made of hollow construction, of sheet steel, sashes glazed with one-quarter inch wired glass, and made to close automatically on the approach of fire. It is weathertight. The Lupton Window is the subject of an interesting illustrated leaflet now being issued. This publication contains some important facts regarding the Baltimore fire, the opinions of experts and the protection that such a window as the Lupton would have given any building in which it was adopted. David Lupton's Sons Co., Allegheny avenue and Tulip street, Philadelphia, can supply the leaflet. The company manufactures the Lupton Window.

Revolution in Building.

Revolutions in building methods and materials have not been infrequent during the past 20 years. Doubtless the most noted innovation of recent years is the use of artificial stone. Hydraulic stone hollow walls for buildings are among the successful materials now in large demand, and an interesting brochure concerning them is being distributed. This little booklet, fully illustrated, will interest architects, engineers and builders, and especially those who will be actively engaged in the rebuilding of Baltimore. Its contents are brief, yet the claims are strongly stated, but with conservatism. The American Hydraulic Stone Co., Century Building, Denver, Col., issues the booklet in the interests of its methods and machines for manufacturing hollow concrete blocks. The desirability of the company's patents is realized in the statement that "you furnish seven parts of stone and gravel (or broken stone), one part cement, seven men (six unskilled), and we do the rest. Making by hand labor 1000 feet of fireproof wall in a 10-hour day. Ready for laying in 10 days. No burning; simply turn on the hose. No power necessary." The American booklet contains a number of illustrations, including those of a \$400,000 hotel at San Diego, Cal., besides various other structures, in the erection of which American stone has been used.

FINANCIAL NEWS

The Manufacturers' Record invites information about Southern financial matters. Items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

Review of the Baltimore Market.

Office Manufacturers' Record,
Baltimore, Md., April 13.

The Baltimore stock market has experienced a fair amount of business during the past week, with a rise, though only fractional, in Consolidated Gas, and a moderate maintenance of strength in other speculative issues with the exception of Atlantic Coast Line shares, which advanced about two points. Investment securities continue in good demand, and are firmly held.

In the trading United Railways common sold at 7½; the incomes from 53 down to 52½; the 4 per cents between 90 and 90½; the Light & Power 4½s at 77½ and 78½. Consolidated Gas went from 72½ down to 71½, but then gradually recovered and went up to 73½. Seaboard common changed hands at 9¼, and the preferred at 18; the 4s at 68, and the three-year 5s from 85 to 88. Cotton Duck common from 2¼ to 3¼; the incomes at 14½ to 14¾, and the 5s at 60 to 62; G. B. S. common, 3¼ to 4; the incomes at 21, and the 1sts at 47¼ to 48.

Bank stocks sold as follows: Citizens', 25¼ to 26¼; Farmers and Merchants', 55. Trust and fidelity company stocks were dealt in as follows: Mercantile, 131; Central Trust, 40; Fidelity & Deposit, 133; Maryland Casualty, 46½.

Other securities traded in were: Atlantic Coast Line common, 107¾ to 109¾; do. 1st consolidated 4s, 92¾ to 93½; do. new 4s, certificates, 83½ and 84; do. 4s (South Carolina), 100½ and 101; Atlantic Coast Line of Connecticut, 221; West Virginia Central 6s, 111¼ and 111½; Georgia & Alabama Consol. 5s, 103; Columbia & Greenville 1sts, 116; Virginia Midland 1sts, 103¾; do. 2ds, 110¼; do. 5ths, 110 and 110½; City & Suburban 5s (Baltimore), 113½ and 113¾; City & Suburban 5s (Washington), 97 and 98; Carolina Central 4s, 90½ and 90¾; Virginia Centuries, 94½ and 94¾; Northern Central 5s, B, 118; Western North Carolina 6s, 115; Atlanta Street Railway 5s, 106; Charleston Consolidated Electric 5s, 85; Lexington Street Railway 5s, 96½ to 100; Alabama Consolidated Coal & Iron preferred, 60; Maryland Telephone 5s, 79½ and 80; Memphis 6s, 1907, 105½; Anacostia & Potomac 5s, 96; Southside Electric Development & Railway 5s, 80¼; Norfolk Street Railway 5s, 106½ and 107; Georgia Pacific 6s, 122¼; Atlanta & West Point indebtedness certificates 5s, 107; Northern Central stock, 91¼ to 92; South Bound 5s, 105¼; Baltimore City 3½s, 1930, 109; do. 5s, 1916, 118; Georgia, Carolina & Northern 5s, 108; Georgia Southern & Florida 1st preferred, 95.

SECURITIES AT BALTIMORE.

Last Quotations for the Week Ended
April 13, 1904.

Railroad Stocks.	Par.	Bid.	Asked.
Georgia Southern & Florida 100	100	45	
Georgia Sou. & Fla. 1st Pref. 100	100	97	
Georgia Sou. & Fla. 2d Pref. 100	100	96	
United Railways & Elec. Co. 50	50	7	7¼
Seaboard Railway Common 100	100	9¼	9¾
Seaboard Railway Preferred 100	100	17	17¾
Lexington Railway Co. 100	100	52¼	
Atlantic Coast Line 100	100	108¾	109
Atlantic Coast Line of Conn. 100	100	222¼	230

Bank Stocks.	Par.	Bid.	Asked.
Citizens' National Bank 10	10	26	
Commer. & Far. Nat. Bank 100	100		
Drovers & Mech. Nat. Bank 100	100	300	
Farmers & Mer. Nat. Bank 40	40	55	
Merchants' National Bank 100	100	179	
National Bank of Commerce 15	15	23	
National Exchange Bank 100	100	185	
National Marine Bank 30	30	33	
National Mechanics' Bank 10	10	24	
Second National Bank 100	100	190	
Third National Bank 100	100	105	125
Western National Bank 20	20	35	

Trust, Fidelity and Casualty Stocks.

Central Real Estate & Trust 50	33	44
Continental Trust 100		110
Fidelity & Deposit 50	132	135
International Trust 100		88
Maryland Casualty 100	25	46½
Mercantile Trust & Deposit 50	130	132
Union Trust 100	50	25
U. S. Fidelity & Guaranty 100	100	110

Miscellaneous Stocks.

G. B. & S. Brewing Co. 100	31¼	4
United Elec. L. & P. Pref. 50	30	
Cotton Duck Voting Trust 100	27½	3¼
Consolidated Coal 100		68¼
Georgia's Creek Coal 100		86
Consolidated Gas 100	73¼	73½

Railroad Bonds.

Albany & Northern 5s 100	92	
Atlanta & Charlotte 1st 7s, 1907 100	108½	
Atlantic Coast Line 4s 100	93¼	93½
Char. Col. & Aug. 1st 5s, 1910 100	112	
Char. Col. & Aug. 2d 7s, 1910 100	108	
Colum. & Greenville 1st 6s, 1916 100	116	116½
Ga. Car. & North 1st 5s, 1929 100	107	
Ga. South. & Fla. 1st 5s, 1945 100	113	113½
Georgia Pacific 1st 6s, 1922 100	122½	
Petersburg, Class A 5s, 1935 100	112	
Petersburg, Class B 5s, 1935 100	120	
Piedmont & Cum. 1st 5s, 1911 100	106½	
Raleigh & Augusta 1st 6s, 1926 100	117½	
Rich. & Danville Gold 6s, 1915 100	114½	
Savannah, Fla. & West 5s, 1934 100	110¼	
Seaboard & Roanoke 6s, 1916 100	106	
Seaboard & Roanoke 5s, 1926 100	106½	
Southern Railway Con. 5s, 1994 100	112½	
Virginia Midland 1st 6s, 1906 100	103½	
Virginia Midland 2d 6s, 1911 100	110	
Virginia Midland 3d 6s, 1916 100	110	
Virginia Midland 4th 3-4-5s, 1921 100	109	
Virginia Midland 5th 5s, 1926 100	110	110½
West. N. Carolina Con. 6s, 1914 100	115	
West Va. Central 1st 6s, 1911 100	111½	112
Wilmington & Wel. Gold 5s, 1935 100	105¼	
Charleston City Railway 5s, 1923 100	105¼	
Charleston Con. Electric 5s, 1939 100	85	
Knoxville Traction 1st 5s, 1925 100	100	
Norfolk Street Railway 5s, 1944 100	104	
United Railways 1st 4s, 1949 100	90¼	90½
United Railways Inc. 4s, 1949 100	62	62½
Seaboard 4s 100	68	68½
Seaboard 10-year 5s 100	98½	
Seaboard 3-year 5s 100	87½	88
Lexington Railway 1st 5s 100	98½	100
Georgia & Alabama Con. 5s 100	103	103½
South Bound 5s 100	106	106½
Macon Ry. & Lt. 1st Con. 5s 100	85½	

Miscellaneous Bonds.

Mt. V. & Woodby's Cot. Duck 5s 100	61¼	61½
Mt. V. & Woodby's Cot. Duck Inc. 14½ 100	14½	14½
G. B. & S. Brewing 1st 3-4s 100	47½	47½
G. B. & S. Brewing 2d incomes 100	18½	21
United Elec. Light & Power 4½s 100	75	75½
Atlanta Gaslight 1st 5s, 1947 100	101	
Consolidated Gas 5s, 1910 100	109¾	110½
Consolidated Gas 5s, 1939 100	111¾	

SOUTHERN COTTON-MILL STOCKS

Quotations Furnished by Hugh MacRae & Co., Wilmington, N. C., for
Week Ending April 9.

	Bid.	Asked.
Abbeville Cotton Mills (S. C.) 100	75	
Alken Mfg. Co. (S. C.) 100	85	90
Anderson Cotton Mills (S. C.) 100	121	
Arkwright Mills (S. C.) 100	110	
Augusta Factory (Ga.) 100	72	75
Belted Mills (S. C.) 100	102	
Brandon Mills (S. C.) 100	105	
Buffalo Cotton Mills (S. C.) 100	102	
Buffalo Cotton Mills (S. C.) Pfd. 100	101	
Cabarrus Cotton Mills (N. C.) 100	122	
Chiquola Mfg. Co. (S. C.) 100	86	100
Clifton Mfg. Co. (S. C.) 100	95	
Courtenay Mfg. Co. (S. C.) 100	115	116
Columbus Mfg. Co. (Ga.) 100	89	
Dallas Mfg. Co. (Ala.) 100	78	85
Darlington Mfg. Co. (S. C.) 100	91	
Eagle & Phenix Mills (Ga.) 100	110	
Enoree Mfg. Co. (S. C.) 100	74	
Enterprise Mfg. Co. (Ga.) 100	76	80
Exposition Cotton Mills (Ga.) 100	160	200
Gaffney Mfg. Co. (S. C.) 100	74	86
Gainesville Cotton Mills (Ga.) 100	75	
Graniteville Mfg. Co. (S. C.) 100	132½	150
Greenwood Cotton Mills (S. C.) 100	104	
Grendel Mills (S. C.) 100	103	
Hennrietta Mills (N. C.) 100	190	210
King, John P. Mfg. Co. (Ga.) 100	84	90
Lancaster Cotton Mills (S. C.) 100	95	103
Lancaster Cot. Mills (S. C.) Pfd. 100	100	
Langley Mfg. Co. (S. C.) 100	95	100
Lockhart Mills (S. C.) 100	102	
Louise Mills (N. C.) 100	100	
Louise Mills (N. C.) Pfd. 100	102	
Marlboro Cotton Mills (S. C.) 100	90	101
Mills Mfg. Co. (S. C.) 100	100	
Mills Mfg. Co. (S. C.) Pfd. 100	100	
Monarch Cotton Mills (S. C.) 100	90	95
Monaghan Mills (S. C.) 100	100	105
Newberry Cotton Mills (S. C.) 100	111½	
Norris Cotton Mills (S. C.) 100	110	
Odell Mfg. Co. (N. C.) 100	105	
Orangeburg Mfg. Co. (S. C.) Pfd. 100	102	
Orr Cotton Mills (S. C.) 100	106	
Paclet Mfg. Co. (S. C.) Pfd. 100	100	
Pelzer Mfg. Co. (S. C.) 100	190	
Piedmont Mfg. Co. (S. C.) 100	190	
Raleigh Cotton Mills (N. C.) 100	105	
Roanoke Mills (N. C.) 100	102	
Saxon Mills (S. C.) 100	100	103
Sibley Mfg. Co. (Ga.) 100	60	65
Southern Cotton Mills (N. C.) 100	95	
Tucapau Mills (S. C.) 100	141½	
Union Cotton Mills (S. C.) 100	145	155
Victor Mfg. Co. (S. C.) 100	129	137½
Warren Mfg. Co. (S. C.) 100	100	103
Warren Mfg. Co. (S. C.) Pfd. 100	106	
Washington Mills (Va.) 100	20	
Washington Mills (Va.) Pfd. 100	25	
Whitney Mfg. Co. (S. C.) 100	113	126
Wilm'gton Cot. Mills (N. C.) Pfd. 100	100	
Woodruff Cotton Mills (S. C.) 100	95	100

Bank Reports.

The Alabama National Bank of Birmingham, Ala., reports at the close of business March 28 loans, \$1,003,151; deposits, \$1,292,641; available cash, \$392,511; capital, \$200,000; surplus and profits, \$46,834. J. B. Cobbs is president; W. A. Porter, cashier.

The First National Bank of South Bos-

ton, Va., reports at the close of business March 28 loans and discounts, \$104,281; deposits, \$146,369; cash on hand and in banks, \$67,348; capital, \$25,000; surplus and undivided profits, \$39,553. R. H. Edmondson is president; J. D. Tucker, vice-president; H. J. Watkins, Jr., cashier.

The Frost National Bank of San Antonio, Texas, reports at the close of business March 28 loans and discounts, \$1,516,894; deposits, \$1,823,196; cash and exchange, \$825,685; capital, \$250,000; surplus fund, \$250,000; undivided profits, \$23,078. T. C. Frost is president; J. T. Woodhull, vice-president; Ned McIlhenny, cashier.

The First National Bank of Richmond, Va., reports at the close of business March 28 loans and discounts, \$4,265,544; deposits, \$3,953,082; cash and due from banks, \$836,353; capital, \$600,000; surplus, \$400,000; undivided profits, \$69,545. Virginius Newton is president, and John M. Miller, Jr., vice-president and cashier.

The Commercial National Bank of Houston, Texas, reports at the close of business March 28 loans and discounts, \$1,138,829; deposits, \$3,420,254; cash and sight exchange, \$2,827,721; capital, \$300,000; surplus, \$300,000; undivided profits, net, \$158,686. W. B. Chew is president; James A. Baker, Jr., and J. S. Rice, vice-presidents, and F. B. Gray, cashier.

The Citizens' Savings Bank & Trust Co. of Birmingham, Ala., reports on April 1: Individual deposits, \$111,756; loans and discounts, \$21,478; available cash, \$140,070; capital, \$50,000. The bank began business March 1, and calls attention to its deposit line, which, it is stated, is composed of several hundred savings accounts. H. H. Mayberry is president; B. F. Roden, vice-president; J. B. Cobbs, treasurer, and C. G. Davidson, secretary.

The First National Bank of Baltimore, Md., reports on March 28 loans and discounts, \$3,746,618; total deposits, \$5,942,440; specie and legal tender notes, \$511,655; due from national banks, \$921,689; due from State banks, \$188,716; due from approved reserve agents, \$1,092,148; capital stock, \$1,000,000; surplus, \$350,000; undivided profits, net, \$38,603. J. D. Ferguson is president; Theodore Hooper, vice-president; H. B. Wilcox, cashier; William S. Hammond, assistant cashier.

American Bank Reporter.

The American Bank Reporter, February, 1904, has been issued by Stumpf & Steurer, editors and publishers, 20 Nassau street, New York. This valuable book of 1250 pages, which is revised up to March 1, contains an alphabetical list of all banks in the United States and Canada, including national, State, savings and private banks, arranged by States and giving the names of presidents, vice-presidents, cashiers and assistant cashiers. It also shows the correspondents in New York, Philadelphia, Chicago and other large cities, besides the charter number of each national bank and the amount of its capital, surplus and undivided profits, loans, deposits, etc. Furthermore, the book gives the names of the principal loan, trust and investment companies, etc. Nor is this all that it contains, for it also has a list of attorneys in the United States and Canada, an alphabetical list of all bank officers, foreign banks and bankers and directors of banks in all the principal cities, a synopsis of banking and commercial laws of the various States and Canada, bank statements, statistics, etc., a list of towns without banking facilities, with the nearest banking points, and maps of all States and Territories, including Canada. The volume is printed in clear type on good paper, with a thumb index, and is substantially bound in blue cloth, with silver lettering.

New Corporations.

The Bank of Refugio at Refugio, Texas, has begun business.

The Bank of Hogansville of Hogansville, Ga., has been granted a charter.

A new bank is to be established at Lancaster, Smith county, Tennessee, by Mr. Simpson.

Reported that W. A. Barclay and associates will open a private bank at McGregor, Texas, about May 1.

The Union Investment Co. of Alexandria, Va., capital \$5000 to \$50,000, has been chartered, with Harry V. Lansdale as president.

It is reported that a new bank is being organized at Hawesville, Ky., by John S. Adair. A meeting will soon be held to elect officers.

The People's National Bank of Lexington, Va., has begun business. Mr. J. W. McClung is president, and W. M. McElwee, cashier.

The officers of the Dunn Banking Co. at Dunn, N. C., are: D. S. Boykin, president; J. J. Wade, vice-president; R. L. Green, cashier.

The People's Bank of Pensacola, Fla., capital \$50,000, has been incorporated by J. S. Reese, R. M. Cary, W. De C. Kenler, Sol Kohn and L. J. Rivers.

The First National Bank of Mansfield, La., capital \$25,000, is reported organized. Boling Williams will be president, and B. F. Dudley of Lake Charles, La., cashier.

The Campbell County Loan & Security Co. of Newport, Ky., capital \$4000, has been incorporated by Walter Forster, Casper Heeg and H. C. Miller, all of Newport.

The Security Title & Trust Co. of Tampa, Fla., capital \$10,000, has been incorporated by F. L. Rutland, W. F. Himes, J. Tom McCullum and E. L. Pagm.

The First National Bank of Tallapoosa, Ga., has been approved. The organizers are W. S. Witham of Atlanta, Rowe Price, George W. Sheppard, J. C. Tumlin and J. T. Tuggle; capital \$25,000.

The First National Bank of Corning, Ark., capital \$25,000, has been approved. The organizers are J. M. Hawks, A. R. Simpson, John A. Dudgeon, A. Brown and F. G. Taylor.

A company has been organized at Smyrna, Tenn., for the purpose of operating a bank with \$10,000 capital. The officers are: Dr. B. B. Gracy, president; Charles Weakley, vice-president.

The First National Bank of Mansfield, Texas, has been authorized to begin business; capital \$25,000. The officers are: S. T. Marrs, president; Troy Hackler, vice-president; H. P. Mabry, cashier.

The First National Bank of Annona, Texas, capital \$25,000, has been authorized to begin business. The organizers are R. N. Boswell, J. W. Thompson, E. D. Russell, W. A. Connor and R. F. Scott.

The State Exchange Bank of Lake City, Fla., capital \$50,000, has been incorporated. Among the stockholders are Frank Adams, N. Adams, R. W. Adams, A. J. Strickland, John S. Calloway and F. F. Bardin.

The National Bank of John A. Black, Barboursville, Ky., capital \$30,000, has been approved. The incorporators are John A. Black, Barboursville, Ky.; Joseph Miller, W. J. Campbell, James D. Black and J. R. Jones.

The Pocahontas Accident Insurance Co. of Siberia, W. Va., has been chartered, with \$10,000 capital, by F. H. Cecil, W. C. Martin, F. I. Blankenship and W. A. Wiles of Siberia, W. Va., and F. S. Cooper of Gintto, W. Va.

The Property Association of Dallas, Texas, has been incorporated, with \$50,000 capital, to conduct a general building and loan business. The incorporators are N. W. Duncan, J. C. Roberts, Dallas; R.

L. McCreight, Fort Worth; M. O. Sharp, Wm. M. Nagle, Denison.

The First National Bank of McComb, Miss., capital \$100,000, has been approved. The organizers are W. R. Caston, McComb, Miss.; J. J. White, Z. D. Davis, O. B. Quin, Hugh McColgan, H. B. Holmes and W. T. James.

The First National Bank of Martinsville, Va., capital \$50,000, which is a conversion of the Farmers' Bank, has organized, with officers as follows: E. L. Williamson, president; H. C. Lester, vice-president; J. C. Greer, cashier.

The Capital Fire Insurance Co. of Little Rock, Ark., has been incorporated. The directors are Wylie B. Miller (president), Wm. M. Kavanagh (vice-president), Guy B. Sawyers (secretary), Jas. R. Fones (treasurer), Roy M. Henry (auditor), Francis M. Henry and Chas. C. Dean.

Reported that a bank is being organized at White Plains, Ga., with \$25,000 capital, by J. D. Walker, president of the First National Bank of Sparta, and G. W. Tappan, Randolph Tappan, Tappan & Merritt, T. C. Holden, Z. T. Walker, Dr. C. C. King, Edward Lewis, L. J. Grimes and others.

The Union Banking & Trust Co. of Aiken, S. C., has been chartered, with \$50,000 capital. The officers are: President, W. S. Reamer; vice-president, Oliver P. Hurd; secretary and treasurer, W. F. Alston. The other corporators are Walter D. Munsen and F. C. Williams, both of New York.

The Bryson City Bank of Bryson City, N. C., capital \$5000, has been organized by electing D. K. Collins, president; G. W. Maslin, vice-president, and L. Lee Marr, cashier. The incorporators are D. K. Collins of Bryson City, G. W. Maslin of Waynesville, S. W. Black and A. H. Elmore of Bryson City.

The Bank of Kemper, capital \$30,000, has organized at Seoba, Miss., with the following officers: Joe Cramer, president; M. E. Ward, vice-president; J. E. Kuykendall, cashier; directors, Joe Cramer, S. S. Neville, C. Rosenbaum, J. H. Duke, R. M. Quarles, M. E. Ward, W. P. Holland, J. E. Kuykendall.

A charter has been granted the United States Mutual Insurance Co., principal office at Elizabeth City, N. C. The incorporators are A. K. Spraker, J. M. Johnston, W. J. Spraker, A. C. Spraker, Wayland Hayes, H. C. Grice, M. Whedbee, W. T. Davis, J. V. Whitehurst and Jas. W. Knight, all of Elizabeth City.

Reported that a new fire insurance company with \$500,000 capital is being organized at St. Louis, Mo., by R. N. Le Cron, James D. Morris, Thomas C. Hennings, Dwight D. Currie, Paul P. Prosser, Glendy B. Arnold, B. C. Anderson, F. A. Chopin, William R. J. Scullin, Edward P. Fitzwilliam, W. C. Connett and Mark A. Staed.

The First National Bank of Alpine, Texas, has organized, with officers as follows: C. A. Brown, president; H. L. Kokernot, vice-president; J. H. Derrick, teller; directors, A. S. Gage, San Antonio; W. J. McIntyre, H. L. Kokernot, Alpine; D. B. Hornbeck, Elgin, Ill.; C. A. Brown, Alpine; L. L. Hess, Marathon; R. L. Nevil, Alpine.

The Union Mutual Association of Atlanta, Ga., has applied for a charter to conduct an industrial insurance business upon a mutual plan. T. W. Walker, H. Strawbridge and J. M. King of Jefferson county, Alabama, and William Driskill, W. A. Aderhold, H. G. Young and W. O. Castleberry of Atlanta are petitioners.

New Securities.

Arcadia, Fla.—The city has voted to issue \$12,000 of bonds for schools. The bond trustees are W. H. Simmons, C. C.

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Chollar and J. B. Bunch; the mayor is J. W. Burton; city clerk, R. B. Campbell.	
Atlanta, Ga.—It is reported that arrangements have been made to sell \$94,000 worth of city 3½ per cent. bonds to the sinking fund commission. The entire issue amounted to \$400,000.	
Austin, Texas.—Bell county has been authorized to issue \$6500 of 4 per cent. 40-year bonds for bridge improvements.	
Baltimore, Md.—An election may be held on May 3 to vote on the \$6,000,000 dock loan.	
Checotah, I. T.—The town has voted to issue \$15,000 of school bonds.	
Columbia, Tenn.—An election is to be held on May 7 to vote on an issue of \$30,000 of 4 per cent. bonds to fund the city debt.	
Columbus, Ga.—The city will vote on July 8 upon an issue of \$40,000 of 4 per cent. bonds.	
Dawson, Ga.—The city has sold \$20,000 of school bonds to Rudolph Kleybolte & Co. of Cincinnati at par and interest.	
Enid, O. T.—The city has voted to issue \$75,000 of water bonds.	

[For Additional Financial News, See Page 35.]

